



**TEST REPORT**  
**IEC 62368-1**  
**Audio/video, information and communication technology equipment**  
**Part 1: Safety requirements**

**Report Number.** ..... : AOC250527003S

**Date of issue** ..... : 2025-05-29

**Total number of pages** ..... : 56 pages

**Name of Testing Laboratory preparing the Report** ..... : Shenzhen AOCE Electronic Technology Service Co., Ltd  
Room 202, 2nd Floor, No.12th Building of Xinhe Tongfuyu Industrial Park, Fuhai Street, Baoan District, Shenzhen, Guangdong, China

**Applicant's name** ..... : CNUS TECH (Guangdong) Co., Ltd

**Address** ..... : Plant 2,16# Lianyun Yiheng Road, Shiqi Town, Panyu District, Guangzhou City, China

**Test specification:**

**Standard** ..... : ☒ IEC 62368-1:2018

**Test procedure** ..... : Test report

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

**TRF template used** ..... : IECEE OD-2020-F1:2020, Ed.1.3

**Test Report Form No.** ..... : IEC 62368\_1E

**Test Report Form(s) Originator** .... : UL(US)

**Master TRF** ..... : Dated 2021-02-04

**Copyright © 2021 IEC System of Conformity Assessment Schemes for Electrotechnical Equipment and Components (IECEE System). All rights reserved.**

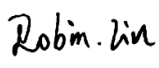
This publication may be reproduced in whole or in part for non-commercial purposes as long as the IECEE is acknowledged as copyright owner and source of the material. IECEE takes no responsibility for and will not assume liability for damages resulting from the reader's interpretation of the reproduced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

**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 Testing Laboratory. The authenticity of this Test Report and its contents can be verified by contacting the Testing Laboratory, responsible for this Test Report.

|                                                                                                   |                                                                                                                     |                                                                                                                                   |
|---------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------|
| <b>Test item description .....</b>                                                                | Strong scent machine                                                                                                |                                                                                                                                   |
| <b>Trade Mark.....</b>                                                                            | scenthope, cnus, zonescent, nova scent, zoom scent, rana scent, bourbon scent                                       |                                                                                                                                   |
| <b>Manufacturer .....</b>                                                                         | CNUS TECH (Guangdong) Co., Ltd<br>Plant 2,16# Lianyun Yiheng Road,Shiqi Town, Panyu District, Guangzhou City, China |                                                                                                                                   |
| <b>Model/Type reference.....</b>                                                                  | GX8000, ADS550, ADS1FD430, ADS2FD, ADS430FB, PRO2, GX8000touch, ADS430, ADS430-Touch                                |                                                                                                                                   |
| <b>Ratings.....</b>                                                                               | Input:100-250V~, 50/60Hz, 80W                                                                                       |                                                                                                                                   |
| <b>Responsible Testing Laboratory (as applicable), testing procedure and testing location(s):</b> |                                                                                                                     |                                                                                                                                   |
| <input checked="" type="checkbox"/>                                                               | <b>Testing Laboratory:</b>                                                                                          | Shenzhen AOCE Electronic Technology Service Co., Ltd                                                                              |
| <b>Testing location/ address .....</b>                                                            |                                                                                                                     | Room 202, 2nd Floor, No.12th Building of Xinhe Tongfuyu Industrial Park, Fuhai Street, Baoan District, Shenzhen, Guangdong, China |
| <b>Tested by (name, function, signature) .....</b>                                                |                                                                                                                     | Bill Hu<br>Technical Engineer<br>              |
| <b>Approved by (name, function, signature) ..</b>                                                 |                                                                                                                     | Robin Liu<br>Technical Manager<br>           |
| <b>Testing procedure: CTF Stage 1:</b>                                                            |                                                                                                                     |                                                                                                                                   |
| <b>Testing location/ address .....</b>                                                            |                                                                                                                     |                                                                                                                                   |
| <b>Tested by (name, function, signature) .....</b>                                                |                                                                                                                     |                                                                                                                                   |
| <b>Approved by (name, function, signature) ..</b>                                                 |                                                                                                                     |                                                                                                                                   |
| <b>Testing procedure: CTF Stage 2:</b>                                                            |                                                                                                                     |                                                                                                                                   |
| <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>                                                 |                                                                                                                     |                                                                                                                                   |
| <b>Testing procedure: CTF Stage 3:</b>                                                            |                                                                                                                     |                                                                                                                                   |
| <b>Testing procedure: CTF Stage 4:</b>                                                            |                                                                                                                     |                                                                                                                                   |
| <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> |  |  |
|                                                    |  |  |

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

**Attachment No.1:** Photo document.

**Summary of testing:**
**Tests performed (name of test and test clause):**

- IEC 62368-1:2018

**Testing location:**

Shenzhen AOCE Electronic Technology Service Co., Ltd  
Room 202, 2nd Floor, No.12th Building of Xinhe Tongfuyu Industrial Park, Fuhai Street, Baoan District, Shenzhen, Guangdong, China

**Summary of compliance with National Differences (List of countries addressed):None**

☐ The product fulfils the requirements of EN IEC 62368-1:2020+A11:2020.

**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.

Trade mark: “scenthope” or “cnus” or “zonescent” or “nova scent” or “zoom scent” or “rana scent” or “bourbon scent”.

Strong scent machine  
GX8000  
100-250V~, 50/60Hz, 80W



Import: XXX  
Address: XXX

Manufacturer: CNUS TECH (Guangdong) Co., Ltd

Address: Plant 2,16# Lianyun Yiheng Road,Shiqi Town, Panyu District,  
Guangzhou City, China

Made in China

|                                                             |                                                                  |                                                  |                                                |
|-------------------------------------------------------------|------------------------------------------------------------------|--------------------------------------------------|------------------------------------------------|
| <b>Test item particulars:</b>                               |                                                                  |                                                  |                                                |
| <b>Product group</b> .....                                  | <input checked="" type="checkbox"/> end product                  | <input type="checkbox"/> built-in component      |                                                |
| <b>Classification of use by</b> .....                       | <input checked="" type="checkbox"/> Ordinary person              | <input type="checkbox"/> Children likely present |                                                |
|                                                             | <input checked="" type="checkbox"/> Instructed person            |                                                  |                                                |
|                                                             | <input checked="" type="checkbox"/> Skilled person               |                                                  |                                                |
| <b>Supply connection</b> .....                              | <input checked="" type="checkbox"/> AC mains                     | <input type="checkbox"/> DC mains                |                                                |
|                                                             | <input type="checkbox"/> not mains connected:                    |                                                  |                                                |
|                                                             | <input type="checkbox"/> ES1                                     | <input type="checkbox"/> ES2                     | <input type="checkbox"/> ES3                   |
| <b>Supply tolerance</b> .....                               | <input checked="" type="checkbox"/> +10%/-10%                    |                                                  |                                                |
|                                                             | <input type="checkbox"/> +20%/-15%                               |                                                  |                                                |
|                                                             | <input type="checkbox"/> + %/ - %                                |                                                  |                                                |
|                                                             | <input type="checkbox"/> None                                    |                                                  |                                                |
| <b>Supply connection – type</b> .....                       | <input checked="" type="checkbox"/> pluggable equipment type A - |                                                  |                                                |
|                                                             | <input type="checkbox"/> non-detachable supply cord              |                                                  |                                                |
|                                                             | <input checked="" type="checkbox"/> appliance coupler            |                                                  |                                                |
|                                                             | <input type="checkbox"/> direct plug-in                          |                                                  |                                                |
|                                                             | <input type="checkbox"/> pluggable equipment type B -            |                                                  |                                                |
|                                                             | <input type="checkbox"/> non-detachable supply cord              |                                                  |                                                |
|                                                             | <input type="checkbox"/> appliance coupler                       |                                                  |                                                |
|                                                             | <input type="checkbox"/> permanent connection                    |                                                  |                                                |
|                                                             | <input type="checkbox"/> mating connector                        |                                                  |                                                |
|                                                             | <input type="checkbox"/> other:                                  |                                                  |                                                |
| <b>Considered current rating of protective device</b> ..... | <input checked="" type="checkbox"/> 16A for building A;          |                                                  |                                                |
|                                                             | Location:                                                        | <input checked="" type="checkbox"/> building     | <input type="checkbox"/> equipment             |
|                                                             | <input type="checkbox"/> N/A                                     |                                                  |                                                |
| <b>Equipment mobility</b> .....                             | <input checked="" type="checkbox"/> movable                      | <input type="checkbox"/> hand-held               | <input type="checkbox"/> transportable         |
|                                                             | <input type="checkbox"/> direct plug-in                          | <input checked="" type="checkbox"/> stationary   | <input type="checkbox"/> for building-in       |
|                                                             | <input type="checkbox"/> wall/ceiling-mounted                    | <input type="checkbox"/> SRME/rack-mounted       |                                                |
|                                                             | <input type="checkbox"/> other:                                  |                                                  |                                                |
| <b>Overvoltage category (OVC)</b> .....                     | <input type="checkbox"/> OVC I                                   | <input checked="" type="checkbox"/> OVC II       | <input type="checkbox"/> OVC III               |
|                                                             | <input type="checkbox"/> OVC IV                                  | <input type="checkbox"/> other:                  |                                                |
| <b>Class of equipment</b> .....                             | <input checked="" type="checkbox"/> Class I                      | <input type="checkbox"/> Class II                | <input type="checkbox"/> Class III             |
|                                                             | <input type="checkbox"/> Not classified                          | <input type="checkbox"/>                         |                                                |
| <b>Special installation location</b> .....                  | <input checked="" type="checkbox"/> N/A                          | <input type="checkbox"/> restricted access area  |                                                |
|                                                             | <input type="checkbox"/> outdoor location                        | <input type="checkbox"/> other:                  |                                                |
| <b>Pollution degree (PD)</b> .....                          | <input type="checkbox"/> PD 1                                    | <input checked="" type="checkbox"/> PD 2         | <input type="checkbox"/> PD 3                  |
| <b>Manufacturer's specified T<sub>ma</sub></b> .....        | 35 °C                                                            | <input type="checkbox"/> Outdoor: minimum        | °C                                             |
| <b>IP protection class</b> .....                            | <input checked="" type="checkbox"/> IPX0                         | <input type="checkbox"/> IP__                    |                                                |
| <b>Power systems</b> .....                                  | <input checked="" type="checkbox"/> TN                           | <input type="checkbox"/> TT                      | <input type="checkbox"/> IT - V <sub>L-L</sub> |
|                                                             | <input type="checkbox"/> not AC mains                            |                                                  |                                                |
| <b>Altitude during operation (m)</b> .....                  | <input checked="" type="checkbox"/> 2000 m or less               | <input type="checkbox"/>                         | m                                              |
| <b>Altitude of test laboratory (m)</b> .....                | <input checked="" type="checkbox"/> 2000 m or less               | <input type="checkbox"/>                         | m                                              |
| <b>Mass of equipment (kg)</b> .....                         | >25kg                                                            |                                                  |                                                |

|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                                                                                                                     |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------|
| <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>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                                                                                                                     |
| Date of receipt of test item .....                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | 2024-04-11                                                                                                          |
| Date (s) of performance of tests .....                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | 2024-04-11 to 2024-06-03                                                                                            |
| <b>General remarks:</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                                                                                                                     |
| <p>The tested sample(s) and the sample information are provided by the client.</p> <p>"(See Enclosure #)" refers to additional information appended to the report.</p> <p>"(See appended table)" refers to a table appended to the report.</p> <p><b>Note: EN Group Differences together with National Differences and Special National Conditions, if any, are in the Appendix to the main body of this TRF.</b></p> <p><b>Throughout this report a <input type="checkbox"/> comma / <input checked="" type="checkbox"/> point is used as the decimal separator.</b></p> <p>The test report only allows to be revised only within the report defined retention period unless standard or regulation was withdrawn or invalid.</p> <p>When determining for test conclusion, measurement uncertainty of tests has been considered.</p> |                                                                                                                     |
| <b>Manufacturer's Declaration per sub-clause 4.2.5 of IEC 62368-1:</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><br><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>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | CNUS TECH (Guangdong) Co., Ltd<br>Plant 2,16# Lianyun Yiheng Road,Shiqi Town, Panyu District, Guangzhou City, China |
| <b>General product information and other remarks:</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                                                                                                                     |
| 1. The product covered in this report is class I equipment, Is a video playback converter<br>2. Model GX8000 was selected as representative for all testing unless otherwise specified.<br>3. Maximum ambient temperature is 35°C.<br>4. All models are the same but the names are different.<br>5. All test data in this report are from the original report number AOC240603019S, only update the basic information and rated voltage and input test and temperature test.                                                                                                                                                                                                                                                                                                                                                          |                                                                                                                     |

| OVERVIEW OF ENERGY SOURCES AND SAFEGUARDS                 |                                          |            |                                            |                                                   |
|-----------------------------------------------------------|------------------------------------------|------------|--------------------------------------------|---------------------------------------------------|
| Clause                                                    | Possible Hazard                          |            |                                            |                                                   |
| 5                                                         | Electrically-caused injury               |            |                                            |                                                   |
| Class and Energy Source<br>(e.g. ES3: Primary circuit)    | Body Part<br>(e.g. Ordinary)             | Safeguards |                                            |                                                   |
|                                                           |                                          | B          | S                                          | R                                                 |
| ES3: All circuits expect for output circuits              | Ordinary                                 | N/A        | N/A                                        | Enclosure, see 5.3.2, 5.4.2, 5.4.3, 5.5.3, 5.5.4. |
| ES1: Output terminals                                     | Ordinary                                 | N/A        | N/A                                        | N/A                                               |
| 6                                                         | Electrically-caused fire                 |            |                                            |                                                   |
| Class and Energy Source<br>(e.g. PS2: 100 Watt circuit)   | Material part<br>(e.g. Printed board)    | Safeguards |                                            |                                                   |
|                                                           |                                          | B          | 1 <sup>st</sup> S                          | 2 <sup>nd</sup> S                                 |
| PS3                                                       | Enclosure                                | See 6.3.1  | See 6.4.3, 6.4.6                           | N/A                                               |
| PS3                                                       | PCB                                      | See 6.3.1  | V-0                                        | N/A                                               |
| PS3                                                       | Other combustible components / materials | See 6.3.1  | See 6.4.5, 6.4.6                           | N/A                                               |
| PS3                                                       | Internal / external wiring               | See 6.3.1  | See 6.5 (Equipment safeguards, rated VW-1) | N/A                                               |
| 7                                                         | Injury caused by hazardous substances    |            |                                            |                                                   |
| Class and Energy Source<br>(e.g. Ozone)                   | Body Part<br>(e.g., Skilled)             | Safeguards |                                            |                                                   |
|                                                           |                                          | B          | S                                          | R                                                 |
| N/A                                                       | N/A                                      | N/A        | N/A                                        | N/A                                               |
| 8                                                         | Mechanically-caused injury               |            |                                            |                                                   |
| Class and Energy Source<br>(e.g. MS3: Plastic fan blades) | Body Part<br>(e.g. Ordinary)             | Safeguards |                                            |                                                   |
|                                                           |                                          | B          | S                                          | R                                                 |
| MS1: Equipment Mass                                       | Ordinary                                 | N/A        | N/A                                        | N/A                                               |
| MS1: Sharp edges and corner of product                    | Ordinary                                 | N/A        | N/A                                        | N/A                                               |
| 9                                                         | Thermal burn                             |            |                                            |                                                   |
| Class and Energy Source<br>(e.g. TS1: Keyboard caps)      | Body Part<br>(e.g., Ordinary)            | Safeguards |                                            |                                                   |
|                                                           |                                          | B          | S                                          | R                                                 |
| TS1: All accessible parts                                 | Ordinary                                 | N/A        | N/A                                        | N/A                                               |
| 10                                                        | Radiation                                |            |                                            |                                                   |

| Class and Energy Source<br>(e.g. RS1: PMP sound output)                                                        | Body Part<br>(e.g., Ordinary) | Safeguards |     |     |
|----------------------------------------------------------------------------------------------------------------|-------------------------------|------------|-----|-----|
|                                                                                                                |                               | B          | S   | R   |
| N/A                                                                                                            | N/A                           | N/A        | N/A | N/A |
| Supplementary Information:<br>“B” – Basic Safeguard; “S” – Supplementary Safeguard; “R” – Reinforced Safeguard |                               |            |     |     |

| ENERGY SOURCE DIAGRAM                                                                                                                                                                                                                                                                                                                                                                |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <p><b>Optional.</b> Manufacturers are to provide the energy sources diagram identify declared energy sources and identifying the demarcations are between power sources. Recommend diagram be provided included in power supply and multipart systems.</p> <p>Insert diagram below. Example diagram designs are; Block diagrams; image(s) with layered data; mechanical drawings</p> |
| <div style="text-align: center;"> <input checked="" type="checkbox"/> ES              <input checked="" type="checkbox"/> PS              <input checked="" type="checkbox"/> MS              <input checked="" type="checkbox"/> TS              <input checked="" type="checkbox"/> RS         </div>                                                                              |

| IEC 62368-1 |                                                               |                                                                                                                  |         |
|-------------|---------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------|---------|
| Clause      | Requirement + Test                                            | Result - Remark                                                                                                  | Verdict |
| <b>4</b>    | <b>GENERAL REQUIREMENTS</b>                                   |                                                                                                                  | P       |
| 4.1.1       | Acceptance of materials, components and subassemblies         | (See appended Table 4.1.2.)                                                                                      | P       |
| 4.1.2       | Use of components                                             | Safeguard components are certified to IEC and/or national standards and are used correctly within their ratings. | P       |
| 4.1.3       | Equipment design and construction                             |                                                                                                                  | P       |
| 4.1.4       | Specified ambient temperature for outdoor use (°C)<br>..... : |                                                                                                                  | N/A     |
| 4.1.5       | Constructions and components not specifically covered         |                                                                                                                  | N/A     |
| 4.1.8       | Liquids and liquid filled components (LFC)                    |                                                                                                                  | N/A     |
| 4.1.15      | Markings and instructions                                     | (See Annex F)                                                                                                    | P       |
| 4.4.3       | Safeguard robustness                                          |                                                                                                                  | P       |
| 4.4.3.1     | General                                                       |                                                                                                                  | P       |
| 4.4.3.2     | Steady force tests                                            | (See Clause T.5)                                                                                                 | P       |
| 4.4.3.3     | Drop tests                                                    |                                                                                                                  | N/A     |
| 4.4.3.4     | Impact tests                                                  | (See Clause T.6)                                                                                                 | P       |
| 4.4.3.5     | Internal accessible safeguard tests                           |                                                                                                                  | N/A     |
| 4.4.3.6     | Glass impact tests                                            |                                                                                                                  | N/A     |
| 4.4.3.7     | Glass fixation tests                                          |                                                                                                                  | N/A     |
|             | Glass impact test (1J)                                        |                                                                                                                  | N/A     |
|             | Push/pull test (10 N)                                         |                                                                                                                  | N/A     |
| 4.4.3.8     | Thermoplastic material tests                                  |                                                                                                                  | N/A     |
| 4.4.3.9     | Air comprising a safeguard                                    |                                                                                                                  | N/A     |
| 4.4.3.10    | Accessibility, glass, safeguard effectiveness                 | All safeguard remains effective                                                                                  | P       |
| 4.4.4       | Displacement of a safeguard by an insulating liquid           |                                                                                                                  | N/A     |
| 4.4.5       | Safety interlocks                                             | (See Annex K)                                                                                                    | N/A     |
| <b>4.5</b>  | <b>Explosion</b>                                              |                                                                                                                  | P       |
| 4.5.1       | General                                                       |                                                                                                                  | P       |
| 4.5.2       | No explosion during normal/abnormal operating condition       | (See Clause B.2, B.3)                                                                                            | P       |
|             | No harm by explosion during single fault conditions           | (See Clause B.4)                                                                                                 | P       |

| IEC 62368-1 |                                                                      |                                      |         |
|-------------|----------------------------------------------------------------------|--------------------------------------|---------|
| Clause      | Requirement + Test                                                   | Result - Remark                      | Verdict |
| <b>4.6</b>  | <b>Fixing of conductors</b>                                          |                                      | P       |
|             | Fix conductors not to defeat a safeguard                             |                                      | P       |
|             | Compliance is checked by test ..... :                                | (See Clause T.2)                     | P       |
| <b>4.7</b>  | <b>Equipment for direct insertion into mains socket-outlets</b>      |                                      | N/A     |
| 4.7.2       | Mains plug part complies with relevant standard .. :                 |                                      | N/A     |
| 4.7.3       | Torque (Nm) ..... :                                                  |                                      | N/A     |
| <b>4.8</b>  | <b>Equipment containing coin/button cell batteries</b>               |                                      | N/A     |
| 4.8.1       | General                                                              |                                      | N/A     |
| 4.8.2       | Instructional safeguard ..... :                                      |                                      | N/A     |
| 4.8.3       | Battery compartment door/cover construction                          |                                      | N/A     |
|             | Open torque test                                                     |                                      | N/A     |
| 4.8.4.2     | Stress relief test                                                   |                                      | N/A     |
| 4.8.4.3     | Battery replacement test                                             |                                      | N/A     |
| 4.8.4.4     | Drop test                                                            |                                      | N/A     |
| 4.8.4.5     | Impact test                                                          |                                      | N/A     |
| 4.8.4.6     | Crush test                                                           |                                      | N/A     |
| 4.8.5       | Compliance                                                           |                                      | N/A     |
|             | 30N force test with test probe                                       |                                      | N/A     |
|             | 20N force test with test hook                                        |                                      | N/A     |
| <b>4.9</b>  | <b>Likelihood of fire or shock due to entry of conductive object</b> |                                      | P       |
| <b>4.10</b> | <b>Component requirements</b>                                        |                                      | P       |
| 4.10.1      | Disconnect Device                                                    | (See Annex L)                        | P       |
| 4.10.2      | Switches and relays                                                  | It meets the requirements of 61058-1 | P       |

|            |                                                               |                          |     |
|------------|---------------------------------------------------------------|--------------------------|-----|
| <b>5</b>   | <b>ELECTRICALLY-CAUSED INJURY</b>                             |                          | P   |
| <b>5.2</b> | <b>Classification and limits of electrical energy sources</b> |                          | P   |
| 5.2.2      | ES1, ES2 and ES3 limits                                       | (See appended table 5.2) | P   |
| 5.2.2.2    | Steady-state voltage and current limits ..... :               | (See appended table 5.2) | P   |
| 5.2.2.3    | Capacitance limits ..... :                                    |                          | N/A |
| 5.2.2.4    | Single pulse limits ..... :                                   |                          | N/A |
| 5.2.2.5    | Limits for repetitive pulses ..... :                          |                          | N/A |
| 5.2.2.6    | Ringing signals                                               |                          | N/A |

| IEC 62368-1 |                                                                                       |                                                                            |         |
|-------------|---------------------------------------------------------------------------------------|----------------------------------------------------------------------------|---------|
| Clause      | Requirement + Test                                                                    | Result - Remark                                                            | Verdict |
| 5.2.2.7     | Audio signals                                                                         | (See Clause E.1)                                                           | P       |
| <b>5.3</b>  | <b>Protection against electrical energy sources</b>                                   |                                                                            | P       |
| 5.3.1       | General Requirements for accessible parts to ordinary, instructed and skilled persons |                                                                            | P       |
| 5.3.1 a)    | Accessible ES1/ES2 derived from ES2/ES3 circuits                                      |                                                                            | P       |
| 5.3.1 b)    | Skilled persons not unintentional contact ES3 bare conductors                         |                                                                            | N/A     |
| 5.3.2.1     | Accessibility to electrical energy sources and safeguards                             | ES2 or ES3 source cannot access by ordinary persons                        | P       |
|             | Accessibility to outdoor equipment bare parts                                         | No outdoor equipment.                                                      | N/A     |
| 5.3.2.2     | Contact requirements                                                                  |                                                                            | P       |
|             | Test with test probe from Annex V                                                     | No bare parts at ES2 or ES3 basic safeguard could be accessed by operator. | —       |
| 5.3.2.2 a)  | Air gap – electric strength test potential (V) .....                                  | (See appended table 5.4.9)                                                 | N/A     |
| 5.3.2.2 b)  | Air gap – distance (mm) .....                                                         | >0.2                                                                       | P       |
| 5.3.2.3     | Compliance                                                                            |                                                                            | P       |
| 5.3.2.4     | Terminals for connecting stripped wire                                                | No such terminals                                                          | N/A     |
| <b>5.4</b>  | <b>Insulation materials and requirements</b>                                          |                                                                            | P       |
| 5.4.1.2     | Properties of insulating material                                                     | Hygroscopic materials are not used for insulating materia                  | P       |
| 5.4.1.3     | Material is non-hygroscopic                                                           |                                                                            | P       |
| 5.4.1.4     | Maximum operating temperature for insulating materials .....                          | (See appended table 5.4.1.4, 9.3, B.1.5, B.2.6)                            | P       |
| 5.4.1.5     | Pollution degrees .....                                                               | PD2.                                                                       | P       |
| 5.4.1.5.2   | Test for pollution degree 1 environment and for an insulating compound                | Pollution degree 2 is applied                                              | N/A     |
| 5.4.1.5.3   | Thermal cycling test                                                                  |                                                                            | N/A     |
| 5.4.1.6     | Insulation in transformers with varying dimensions                                    |                                                                            | N/A     |
| 5.4.1.7     | Insulation in circuits generating starting pulses                                     |                                                                            | N/A     |
| 5.4.1.8     | Determination of working voltage .....                                                | (see appended table 5.4.1.8)                                               | P       |
| 5.4.1.9     | Insulating surfaces                                                                   | Considered.                                                                | P       |
| 5.4.1.10    | Thermoplastic parts on which conductive metallic parts are directly mounted           |                                                                            | P       |
| 5.4.1.10.2  | Vicat test.....                                                                       |                                                                            | N/A     |

| IEC 62368-1 |                                                                               |                                   |         |
|-------------|-------------------------------------------------------------------------------|-----------------------------------|---------|
| Clause      | Requirement + Test                                                            | Result - Remark                   | Verdict |
| 5.4.1.10.3  | Ball pressure test .....                                                      |                                   | N/A     |
| 5.4.2       | Clearances                                                                    | (see appended table 5.4.2, 5.4.3) | P       |
| 5.4.2.1     | General requirements                                                          |                                   | P       |
|             | Clearances in circuits connected to AC Mains, Alternative method              |                                   | N/A     |
| 5.4.2.2     | Procedure 1 for determining clearance                                         |                                   | N/A     |
|             | Temporary overvoltage .....                                                   |                                   | —       |
| 5.4.2.3     | Procedure 2 for determining clearance                                         |                                   | P       |
| 5.4.2.3.2.2 | a.c. mains transient voltage .....                                            | 2500Vpeak.                        | —       |
| 5.4.2.3.2.3 | d.c. mains transient voltage .....                                            |                                   | —       |
| 5.4.2.3.2.4 | External circuit transient voltage.....                                       |                                   | —       |
| 5.4.2.3.2.5 | Transient voltage determined by measurement .....                             |                                   | —       |
| 5.4.2.4     | Determining the adequacy of a clearance using an electric strength test ..... |                                   | N/A     |
| 5.4.2.5     | Multiplication factors for clearances and test voltages .....                 |                                   | N/A     |
| 5.4.2.6     | Clearance measurement .....                                                   | (see appended table 5.4.2, 5.4.3) | P       |
| 5.4.3       | Creepage distances                                                            |                                   | P       |
| 5.4.3.1     | General                                                                       |                                   | P       |
| 5.4.3.3     | Material group .....                                                          | IIIb                              | —       |
| 5.4.3.4     | Creepage distances measurement .....                                          | (See appended table 5.4.3)        | P       |
| 5.4.4       | Solid insulation                                                              | See below                         | P       |
| 5.4.4.1     | General requirements                                                          |                                   | P       |
| 5.4.4.2     | Minimum distance through insulation .....                                     | (See appended table 5.4.4.2)      | P       |
| 5.4.4.3     | Insulating compound forming solid insulation                                  |                                   | N/A     |
| 5.4.4.4     | Solid insulation in semiconductor devices                                     |                                   | N/A     |
| 5.4.4.5     | Insulating compound forming cemented joints                                   |                                   | N/A     |
| 5.4.4.6     | Thin sheet material                                                           |                                   | P       |

| IEC 62368-1 |                                                                                   |                                                                                                                                                                                    |         |
|-------------|-----------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------|
| Clause      | Requirement + Test                                                                | Result - Remark                                                                                                                                                                    | Verdict |
| 5.4.4.6.1   | General requirements                                                              | At least 2 layers of insulation tape are used for reinforced insulation and are not expected to be subject to handling or abrasion during ordinary or instructed person servicing. | P       |
| 5.4.4.6.2   | Separable thin sheet material                                                     | Two layers are provided as reinforced insulation any one layer passed the electric strength test for reinforced insulation.                                                        | P       |
|             | Number of layers (pcs) .....                                                      | See above                                                                                                                                                                          | P       |
| 5.4.4.6.3   | Non-separable thin sheet material                                                 |                                                                                                                                                                                    | N/A     |
|             | Number of layers (pcs) .....                                                      |                                                                                                                                                                                    | N/A     |
| 5.4.4.6.4   | Standard test procedure for non-separable thin sheet material .....               |                                                                                                                                                                                    | N/A     |
| 5.4.4.6.5   | Mandrel test                                                                      |                                                                                                                                                                                    | N/A     |
| 5.4.4.7     | Solid insulation in wound components                                              | See G.5.3 and G.6.1                                                                                                                                                                | P       |
| 5.4.4.9     | Solid insulation at frequencies >30 kHz, $E_P$ , $K_R$ , $d$ , $V_{PW}$ (V) ..... |                                                                                                                                                                                    | N/A     |
|             | Alternative by electric strength test, tested voltage (V), $K_R$ .....            |                                                                                                                                                                                    | N/A     |
| 5.4.5       | Antenna terminal insulation                                                       |                                                                                                                                                                                    | N/A     |
| 5.4.5.1     | General                                                                           |                                                                                                                                                                                    | N/A     |
| 5.4.5.2     | Voltage surge test                                                                |                                                                                                                                                                                    | N/A     |
| 5.4.5.3     | Insulation resistance ( $M\Omega$ ) .....                                         |                                                                                                                                                                                    | N/A     |
|             | Electric strength test .....                                                      |                                                                                                                                                                                    | N/A     |
| 5.4.6       | Insulation of internal wire as part of supplementary safeguard                    |                                                                                                                                                                                    | N/A     |
| 5.4.7       | Tests for semiconductor components and for cemented joints                        |                                                                                                                                                                                    | N/A     |
| 5.4.8       | Humidity conditioning                                                             |                                                                                                                                                                                    | P       |
|             | Relative humidity (%), temperature ( $^{\circ}C$ ), duration (h) .....            | 95%, 40 $^{\circ}C$ , 120h                                                                                                                                                         | —       |
| 5.4.9       | Electric strength test                                                            | (See appended table 5.4.9)                                                                                                                                                         | P       |
| 5.4.9.1     | Test procedure for type test of solid insulation .....                            | Method 1 used.                                                                                                                                                                     | P       |
| 5.4.9.2     | Test procedure for routine test                                                   |                                                                                                                                                                                    | N/A     |

| IEC 62368-1 |                                                                                 |                           |         |
|-------------|---------------------------------------------------------------------------------|---------------------------|---------|
| Clause      | Requirement + Test                                                              | Result - Remark           | Verdict |
| 5.4.10      | Safeguards against transient voltages from external circuits                    |                           | N/A     |
| 5.4.10.1    | Parts and circuits separated from external circuits                             |                           | N/A     |
| 5.4.10.2    | Test methods                                                                    |                           | N/A     |
| 5.4.10.2.1  | General                                                                         |                           | N/A     |
| 5.4.10.2.2  | Impulse test .....                                                              |                           | N/A     |
| 5.4.10.2.3  | Steady-state test.....                                                          |                           | N/A     |
| 5.4.10.3    | Verification for insulation breakdown for impulse test .....                    |                           | N/A     |
| 5.4.11      | Separation between external circuits and earth                                  |                           | N/A     |
| 5.4.11.1    | Exceptions to separation between external circuits and earth                    |                           | N/A     |
| 5.4.11.2    | Requirements                                                                    |                           | N/A     |
|             | SPDs bridge separation between external circuit and earth                       |                           | N/A     |
|             | Rated operating voltage $U_{op}$ (V) .....                                      |                           | —       |
|             | Nominal voltage $U_{peak}$ (V) .....                                            |                           | —       |
|             | Max increase due to variation $\Delta U_{sp}$ .....                             |                           | —       |
|             | Max increase due to ageing $\Delta U_{sa}$ .....                                |                           | —       |
| 5.4.11.3    | Test method and compliance .....                                                |                           | N/A     |
| 5.4.12      | Insulating liquid                                                               |                           | N/A     |
| 5.4.12.1    | General requirements                                                            |                           | N/A     |
| 5.4.12.2    | Electric strength of an insulating liquid .....                                 |                           | N/A     |
| 5.4.12.3    | Compatibility of an insulating liquid .....                                     |                           | N/A     |
| 5.4.12.4    | Container for insulating liquid .....                                           |                           | N/A     |
| <b>5.5</b>  | <b>Components as safeguards</b>                                                 |                           | P       |
| 5.5.1       | General                                                                         |                           | P       |
| 5.5.2       | Capacitors and RC units                                                         |                           | N/A     |
| 5.5.2.1     | General requirement                                                             |                           | N/A     |
| 5.5.2.2     | Safeguards against capacitor discharge after disconnection of a connector ..... |                           | N/A     |
| 5.5.3       | Transformers                                                                    | (See Annex G.5.3)         | P       |
| 5.5.4       | Optocouplers                                                                    | No such Optocouplers used | N/A     |

| IEC 62368-1 |                                                                                          |                                                                                                       |         |
|-------------|------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------|---------|
| Clause      | Requirement + Test                                                                       | Result - Remark                                                                                       | Verdict |
| 5.5.5       | Relays                                                                                   | No such relay used as safeguard                                                                       | N/A     |
| 5.5.6       | Resistors                                                                                |                                                                                                       | N/A     |
| 5.5.7       | SPDs                                                                                     | No such varistor used                                                                                 | N/A     |
| 5.5.8       | Insulation between the mains and an external circuit consisting of a coaxial cable ..... |                                                                                                       | N/A     |
| 5.5.9       | Safeguards for socket-outlets in outdoor equipment                                       |                                                                                                       | N/A     |
|             | RCD rated residual operating current (mA) .....                                          |                                                                                                       | —       |
| <b>5.6</b>  | <b>Protective conductor</b>                                                              |                                                                                                       | P       |
| 5.6.2       | Requirement for protective conductors                                                    | PE of Approved Inlet used.                                                                            | P       |
| 5.6.2.1     | General requirements                                                                     | No switches, current limiting devices or over current protective devices use in Protective conductors | P       |
| 5.6.2.2     | Colour of insulation                                                                     | The insulation is green-and-yellow.                                                                   | P       |
| 5.6.3       | Requirement for protective earthing conductors                                           |                                                                                                       | P       |
|             | Protective earthing conductor size (mm <sup>2</sup> ) .....                              | (see table 4.1.2)                                                                                     | —       |
|             | Protective earthing conductor serving as a reinforced safeguard                          |                                                                                                       | N/A     |
|             | Protective earthing conductor serving as a double safeguard                              |                                                                                                       | P       |
| 5.6.4       | Requirements for protective bonding conductors                                           |                                                                                                       | P       |
| 5.6.4.1     | Protective bonding conductors                                                            |                                                                                                       | P       |
|             | Protective bonding conductor size (mm <sup>2</sup> ). ....                               | (see table 4.1.2)                                                                                     | —       |
| 5.6.4.2     | Protective current rating (A) .....                                                      |                                                                                                       | P       |
| 5.6.5       | Terminals for protective conductors                                                      |                                                                                                       | P       |
| 5.6.5.1     | Terminal size for connecting protective earthing conductors (mm) .....                   |                                                                                                       | N/A     |
|             | Terminal size for connecting protective bonding conductors (mm) .....                    |                                                                                                       | N/A     |
| 5.6.5.2     | Corrosion                                                                                | PE of Approved Inlet is considered as protective earthing conductor is compliance with Annex N        | P       |
| 5.6.6       | Resistance of the protective bonding system                                              |                                                                                                       | P       |
| 5.6.6.1     | Requirements                                                                             |                                                                                                       | P       |

| IEC 62368-1 |                                                                                     |                                                                                                                 |         |
|-------------|-------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------|---------|
| Clause      | Requirement + Test                                                                  | Result - Remark                                                                                                 | Verdict |
| 5.6.6.2     | Test Method..... :                                                                  | (See appended table 5.6.6)                                                                                      | P       |
| 5.6.6.3     | Resistance ( $\Omega$ ) or voltage drop..... :                                      | (See appended table 5.6.6)                                                                                      | P       |
| 5.6.7       | Reliable connection of a protective earthing conductor                              |                                                                                                                 | P       |
| 5.6.8       | Functional earthing                                                                 |                                                                                                                 | N/A     |
|             | Conductor size ( $\text{mm}^2$ )..... :                                             |                                                                                                                 | N/A     |
|             | Class II with functional earthing marking ..... :                                   |                                                                                                                 | N/A     |
|             | Appliance inlet cl & cr (mm)..... :                                                 |                                                                                                                 | N/A     |
| <b>5.7</b>  | <b>Prospective touch voltage, touch current and protective conductor current</b>    |                                                                                                                 | P       |
| 5.7.2       | Measuring devices and networks                                                      |                                                                                                                 | P       |
| 5.7.2.1     | Measurement of touch current                                                        | (See appended table 5.7.4)                                                                                      | P       |
| 5.7.2.2     | Measurement of voltage                                                              | (See appended table 5.7.4)                                                                                      | P       |
| 5.7.3       | Equipment set-up, supply connections and earth connections                          |                                                                                                                 | N/A     |
| 5.7.4       | Unearthed accessible parts ..... :                                                  | Touch current at earthed accessible conductive parts is not exceeding ES2 limits.<br>(See appended table 5.7.4) | P       |
| 5.7.5       | Earthed accessible conductive parts ..... :                                         | (See appended table 5.7.5)                                                                                      | N/A     |
| 5.7.6       | Requirements when touch current exceeds ES2 limits                                  |                                                                                                                 | N/A     |
|             | Protective conductor current (mA)..... :                                            |                                                                                                                 | N/A     |
|             | Instructional Safeguard..... :                                                      |                                                                                                                 | N/A     |
| 5.7.7       | Prospective touch voltage and touch current associated with external circuits       |                                                                                                                 | N/A     |
| 5.7.7.1     | Touch current from coaxial cables                                                   |                                                                                                                 | N/A     |
| 5.7.7.2     | Prospective touch voltage and touch current associated with paired conductor cables |                                                                                                                 | N/A     |
| 5.7.8       | Summation of touch currents from external circuits                                  |                                                                                                                 | N/A     |
|             | a) Equipment connected to earthed external circuits, current (mA) ..... :           |                                                                                                                 | N/A     |
|             | b) Equipment connected to unearthed external circuits, current (mA) ..... :         |                                                                                                                 | N/A     |
| <b>5.8</b>  | <b>Backfeed safeguard in battery backed up supplies</b>                             |                                                                                                                 | N/A     |
|             | Mains terminal ES ..... :                                                           |                                                                                                                 | N/A     |

| IEC 62368-1 |                    |                 |         |
|-------------|--------------------|-----------------|---------|
| Clause      | Requirement + Test | Result - Remark | Verdict |

|  |                    |  |     |
|--|--------------------|--|-----|
|  | Air gap (mm).....: |  | N/A |
|--|--------------------|--|-----|

|            |                                                                                                                                |                                                 |     |
|------------|--------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------|-----|
| <b>6</b>   | <b>ELECTRICALLY- CAUSED FIRE</b>                                                                                               |                                                 | P   |
| <b>6.2</b> | <b>Classification of PS and PIS</b>                                                                                            |                                                 | P   |
| 6.2.2      | Power source circuit classifications .....                                                                                     | All circuits are considered PS3.                | P   |
| 6.2.3      | Classification of potential ignition sources                                                                                   | PS3                                             | P   |
| 6.2.3.1    | Arcing PIS .....                                                                                                               | (See appended table 6.2.3.1)                    | P   |
| 6.2.3.2    | Resistive PIS .....                                                                                                            | (See appended table 6.2.3.2)                    | P   |
| <b>6.3</b> | <b>Safeguards against fire under normal operating and abnormal operating conditions</b>                                        |                                                 | P   |
| 6.3.1      | No ignition and attainable temperature value less than 90 % defined by ISO 871 or less than 300 °C for unknown materials ..... | (See appended table 5.4.1.4, 9.3, B.1.5, B.2.6) | P   |
|            | Combustible materials outside fire enclosure .....                                                                             | (See appended table 5.4.1.4, 9.3, B.1.5, B.2.6) | P   |
| <b>6.4</b> | <b>Safeguards against fire under single fault conditions</b>                                                                   |                                                 | P   |
| 6.4.1      | Safeguard method                                                                                                               | Method of Control fire spread used.             | P   |
| 6.4.2      | Reduction of the likelihood of ignition under single fault conditions in PS1 circuits                                          |                                                 | N/A |
| 6.4.3      | Reduction of the likelihood of ignition under single fault conditions in PS2 and PS3 circuits                                  |                                                 | P   |
| 6.4.3.1    | Supplementary safeguards                                                                                                       |                                                 | P   |
| 6.4.3.2    | Single Fault Conditions .....                                                                                                  | (See appended table B.3, B.4)                   | P   |
|            | Special conditions for temperature limited by fuse                                                                             |                                                 | N/A |
| 6.4.4      | Control of fire spread in PS1 circuits                                                                                         |                                                 | N/A |
| 6.4.5      | Control of fire spread in PS2 circuits                                                                                         |                                                 | P   |

| IEC 62368-1 |                                                                     |                                                                                                                                                                                                                                                                                                                  |         |
|-------------|---------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------|
| Clause      | Requirement + Test                                                  | Result - Remark                                                                                                                                                                                                                                                                                                  | Verdict |
| 6.4.5.2     | Supplementary safeguards                                            | Compliance detailed as follows:<br>- Printed board: rated V-1 or VTM-1 min. class material;<br>- Internal wire: complying with 6.5.<br>- Other components other than PCB and wires are mounted on PCB rated V-1 or VTM-1 min., or made of V-2, VTM-2 or HF2 min.<br>- Winding transformer: complying with G.5.3. | P       |
| 6.4.6       | Control of fire spread in PS3 circuits                              | Compliance detailed as follows:<br>- Parts as in 6.4.5 above<br>- Fire enclosure: rated Metal barrier used.                                                                                                                                                                                                      | P       |
| 6.4.7       | Separation of combustible materials from a PIS                      | See clause 6.4.5 and 6.4.8.                                                                                                                                                                                                                                                                                      | P       |
| 6.4.7.2     | Separation by distance                                              |                                                                                                                                                                                                                                                                                                                  | P       |
| 6.4.7.3     | Separation by a fire barrier                                        |                                                                                                                                                                                                                                                                                                                  | N/A     |
| 6.4.8       | Fire enclosures and fire barriers                                   |                                                                                                                                                                                                                                                                                                                  | P       |
| 6.4.8.2     | Fire enclosure and fire barrier material properties                 | Equipment enclosure was evaluated as a fire enclosure.                                                                                                                                                                                                                                                           | P       |
| 6.4.8.2.1   | Requirements for a fire barrier                                     |                                                                                                                                                                                                                                                                                                                  | N/A     |
| 6.4.8.2.2   | Requirements for a fire enclosure                                   | Metal barrier used.                                                                                                                                                                                                                                                                                              | P       |
| 6.4.8.3     | Constructional requirements for a fire enclosure and a fire barrier |                                                                                                                                                                                                                                                                                                                  | P       |
| 6.4.8.3.1   | Fire enclosure and fire barrier openings                            |                                                                                                                                                                                                                                                                                                                  | P       |
| 6.4.8.3.2   | Fire barrier dimensions                                             |                                                                                                                                                                                                                                                                                                                  | N/A     |
| 6.4.8.3.3   | Top openings and properties                                         | No openings                                                                                                                                                                                                                                                                                                      | N/A     |
|             | Openings dimensions (mm)..... :                                     |                                                                                                                                                                                                                                                                                                                  | N/A     |
| 6.4.8.3.4   | Bottom openings and properties                                      | under components and parts meeting the requirements for V-1 class material,                                                                                                                                                                                                                                      | P       |
|             | Openings dimensions (mm)..... :                                     | Ø4.45mm Max                                                                                                                                                                                                                                                                                                      | P       |
|             | Flammability tests for the bottom of a fire enclosure               |                                                                                                                                                                                                                                                                                                                  | N/A     |
|             | Instructional Safeguard..... :                                      |                                                                                                                                                                                                                                                                                                                  | N/A     |

| IEC 62368-1 |                                                                                                           |                                                                                                                                 |         |
|-------------|-----------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------|---------|
| Clause      | Requirement + Test                                                                                        | Result - Remark                                                                                                                 | Verdict |
| 6.4.8.3.5   | Side openings and properties                                                                              |                                                                                                                                 | N/A     |
|             | Openings dimensions (mm)..... :                                                                           |                                                                                                                                 | N/A     |
| 6.4.8.3.6   | Integrity of a fire enclosure, condition met: a), b) or c)..... :                                         |                                                                                                                                 | N/A     |
| 6.4.8.4     | Separation of a PIS from a fire enclosure and a fire barrier distance (mm) or flammability rating ..... : | Metal barrier used.                                                                                                             | P       |
| 6.4.9       | Flammability of insulating liquid..... :                                                                  |                                                                                                                                 | N/A     |
| <b>6.5</b>  | <b>Internal and external wiring</b>                                                                       |                                                                                                                                 | P       |
| 6.5.1       | General requirements                                                                                      | The material of VW-1 on internal wiring were considered compliance equal to equivalent to IEC/TS 60695-11-21 relevant standards | P       |
| 6.5.2       | Requirements for interconnection to building wiring ..... :                                               | No such interconnection to building wiring.                                                                                     | P       |
| 6.5.3       | Internal wiring size (mm <sup>2</sup> ) for socket-outlets..... :                                         | No socket-outlet used.                                                                                                          | N/A     |
| <b>6.6</b>  | <b>Safeguards against fire due to the connection to additional equipment</b>                              |                                                                                                                                 | P       |

|            |                                                                          |  |     |
|------------|--------------------------------------------------------------------------|--|-----|
| <b>7</b>   | <b>INJURY CAUSED BY HAZARDOUS SUBSTANCES</b>                             |  | N/A |
| <b>7.2</b> | <b>Reduction of exposure to hazardous substances</b>                     |  | N/A |
| <b>7.3</b> | <b>Ozone exposure</b>                                                    |  | N/A |
| <b>7.4</b> | <b>Use of personal safeguards or personal protective equipment (PPE)</b> |  | N/A |
|            | Personal safeguards and instructions ..... :                             |  | —   |
| <b>7.5</b> | <b>Use of instructional safeguards and instructions</b>                  |  | N/A |
|            | Instructional safeguard (ISO 7010)..... :                                |  | —   |
| <b>7.6</b> | <b>Batteries and their protection circuits</b>                           |  | N/A |

|            |                                                              |                                                                                      |   |
|------------|--------------------------------------------------------------|--------------------------------------------------------------------------------------|---|
| <b>8</b>   | <b>MECHANICALLY-CAUSED INJURY</b>                            |                                                                                      | P |
| <b>8.2</b> | <b>Mechanical energy source classifications</b>              |                                                                                      | P |
| <b>8.3</b> | <b>Safeguards against mechanical energy sources</b>          |                                                                                      | P |
| <b>8.4</b> | <b>Safeguards against parts with sharp edges and corners</b> |                                                                                      | P |
| 8.4.1      | Safeguards                                                   |                                                                                      | P |
|            | Instructional Safeguard..... :                               | Accessible edges and corners of the equipment are rounded and are classified as MS1. | P |

| IEC 62368-1 |                                                                             |                 |         |
|-------------|-----------------------------------------------------------------------------|-----------------|---------|
| Clause      | Requirement + Test                                                          | Result - Remark | Verdict |
| 8.4.2       | Sharp edges or corners                                                      | MS1             | P       |
| <b>8.5</b>  | <b>Safeguards against moving parts</b>                                      |                 | N/A     |
| 8.5.1       | Fingers, jewellery, clothing, hair, etc., contact with MS2 or MS3 parts     |                 | N/A     |
|             | MS2 or MS3 part required to be accessible for the function of the equipment |                 | N/A     |
|             | Moving MS3 parts only accessible to skilled person                          |                 | N/A     |
| 8.5.2       | Instructional safeguard.....:                                               |                 | N/A     |
| 8.5.4       | Special categories of equipment containing moving parts                     |                 | N/A     |
| 8.5.4.1     | General                                                                     |                 | N/A     |
| 8.5.4.2     | Equipment containing work cells with MS3 parts                              |                 | N/A     |
| 8.5.4.2.1   | Protection of persons in the work cell                                      |                 | N/A     |
| 8.5.4.2.2   | Access protection override                                                  |                 | N/A     |
| 8.5.4.2.2.1 | Override system                                                             |                 | N/A     |
| 8.5.4.2.2.2 | Visual indicator                                                            |                 | N/A     |
| 8.5.4.2.3   | Emergency stop system                                                       |                 | N/A     |
|             | Maximum stopping distance from the point of activation (m).....:            |                 | N/A     |
|             | Space between end point and nearest fixed mechanical part (mm) .....        |                 | N/A     |
| 8.5.4.2.4   | Endurance requirements                                                      |                 | N/A     |
|             | Mechanical system subjected to 100 000 cycles of operation                  |                 | N/A     |
|             | - Mechanical function check and visual inspection                           |                 | N/A     |
|             | - Cable assembly .....                                                      |                 | N/A     |
| 8.5.4.3     | Equipment having electromechanical device for destruction of media          |                 | N/A     |
| 8.5.4.3.1   | Equipment safeguards                                                        |                 | N/A     |
| 8.5.4.3.2   | Instructional safeguards against moving parts .....                         |                 | N/A     |
| 8.5.4.3.3   | Disconnection from the supply                                               |                 | N/A     |
| 8.5.4.3.4   | Cut type and test force (N).....:                                           |                 | N/A     |
| 8.5.4.3.5   | Compliance                                                                  |                 | N/A     |
| 8.5.5       | High pressure lamps                                                         |                 | N/A     |

| IEC 62368-1 |                                                              |                 |         |
|-------------|--------------------------------------------------------------|-----------------|---------|
| Clause      | Requirement + Test                                           | Result - Remark | Verdict |
|             | Explosion test.....:                                         |                 | N/A     |
| 8.5.5.3     | Glass particles dimensions (mm) .....                        |                 | N/A     |
| <b>8.6</b>  | <b>Stability of equipment</b>                                |                 | N/A     |
| 8.6.1       | General                                                      |                 | N/A     |
|             | Instructional safeguard.....:                                |                 | N/A     |
| 8.6.2       | Static stability                                             |                 | N/A     |
| 8.6.2.2     | Static stability test .....                                  |                 | N/A     |
| 8.6.2.3     | Downward force test                                          |                 | N/A     |
| 8.6.3       | Relocation stability                                         |                 | N/A     |
|             | Wheels diameter (mm) .....                                   |                 | —       |
|             | Tilt test                                                    |                 | N/A     |
| 8.6.4       | Glass slide test                                             |                 | N/A     |
| 8.6.5       | Horizontal force test .....                                  |                 | N/A     |
| <b>8.7</b>  | <b>Equipment mounted to wall, ceiling or other structure</b> |                 | N/A     |
| 8.7.1       | Mount means type .....                                       |                 | N/A     |
| 8.7.2       | Test methods                                                 |                 | N/A     |
|             | Test 1, additional downwards force (N).....:                 |                 | N/A     |
|             | Test 2, number of attachment points and test force (N).....: |                 | N/A     |
|             | Test 3 Nominal diameter (mm) and applied torque (Nm).....:   |                 | N/A     |
| <b>8.8</b>  | <b>Handles strength</b>                                      |                 | N/A     |
| 8.8.1       | General                                                      |                 | N/A     |
| 8.8.2       | Handle strength test                                         |                 | N/A     |
|             | Number of handles.....:                                      |                 | —       |
|             | Force applied (N) .....                                      |                 | —       |
| <b>8.9</b>  | <b>Wheels or casters attachment requirements</b>             |                 | N/A     |
| 8.9.2       | Pull test                                                    |                 | N/A     |
| <b>8.10</b> | <b>Carts, stands and similar carriers</b>                    |                 | N/A     |
| 8.10.1      | General                                                      |                 | N/A     |
| 8.10.2      | Marking and instructions.....:                               |                 | N/A     |
| 8.10.3      | Cart, stand or carrier loading test                          |                 | N/A     |

| IEC 62368-1 |                                                               |                 |         |
|-------------|---------------------------------------------------------------|-----------------|---------|
| Clause      | Requirement + Test                                            | Result - Remark | Verdict |
|             | Loading force applied (N) .....                               |                 | N/A     |
| 8.10.4      | Cart, stand or carrier impact test                            |                 | N/A     |
| 8.10.5      | Mechanical stability                                          |                 | N/A     |
|             | Force applied (N) .....                                       |                 | —       |
| 8.10.6      | Thermoplastic temperature stability                           |                 | N/A     |
| <b>8.11</b> | <b>Mounting means for slide-rail mounted equipment (SRME)</b> |                 | N/A     |
| 8.11.1      | General                                                       |                 | N/A     |
| 8.11.2      | Requirements for slide rails                                  |                 | N/A     |
|             | Instructional Safeguard.....                                  |                 | N/A     |
| 8.11.3      | Mechanical strength test                                      |                 | N/A     |
| 8.11.3.1    | Downward force test, force (N) applied .....                  |                 | N/A     |
| 8.11.3.2    | Lateral push force test                                       |                 | N/A     |
| 8.11.3.3    | Integrity of slide rail end stops                             |                 | N/A     |
| 8.11.4      | Compliance                                                    |                 | N/A     |
| <b>8.12</b> | <b>Telescoping or rod antennas</b>                            |                 | N/A     |
|             | Button/ball diameter (mm) .....                               |                 | —       |

|            |                                                     |                                                 |     |
|------------|-----------------------------------------------------|-------------------------------------------------|-----|
| <b>9</b>   | <b>THERMAL BURN INJURY</b>                          |                                                 | P   |
| <b>9.2</b> | <b>Thermal energy source classifications</b>        |                                                 | P   |
| <b>9.3</b> | <b>Touch temperature limits</b>                     |                                                 | P   |
| 9.3.1      | Touch temperatures of accessible parts .....        | (See appended table 5.4.1.4, 9.3, B.1.5, B.2.6) | P   |
| 9.3.2      | Test method and compliance                          |                                                 | P   |
| <b>9.4</b> | <b>Safeguards against thermal energy sources</b>    |                                                 | N/A |
| <b>9.5</b> | <b>Requirements for safeguards</b>                  |                                                 | N/A |
| 9.5.1      | Equipment safeguard                                 |                                                 | N/A |
| 9.5.2      | Instructional safeguard.....                        |                                                 | N/A |
| <b>9.6</b> | <b>Requirements for wireless power transmitters</b> |                                                 | N/A |
| 9.6.1      | General                                             |                                                 | N/A |
| 9.6.2      | Specification of the foreign objects                |                                                 | N/A |
| 9.6.3      | Test method and compliance .....                    |                                                 | N/A |

| IEC 62368-1 |                                                                                               |                           |         |
|-------------|-----------------------------------------------------------------------------------------------|---------------------------|---------|
| Clause      | Requirement + Test                                                                            | Result - Remark           | Verdict |
| <b>10</b>   | <b>RADIATION</b>                                                                              |                           | P       |
| <b>10.2</b> | <b>Radiation energy source classification</b>                                                 |                           | P       |
| 10.2.1      | General classification                                                                        | LED indication light: RS1 | P       |
|             | Lasers .....                                                                                  |                           | —       |
|             | Lamps and lamp systems .....                                                                  |                           | —       |
|             | Image projectors .....                                                                        |                           | —       |
|             | X-Ray .....                                                                                   |                           | —       |
|             | Personal music player .....                                                                   |                           | —       |
| <b>10.3</b> | <b>Safeguards against laser radiation</b>                                                     |                           | N/A     |
|             | The standard(s) equipment containing laser(s) comply .....                                    |                           | N/A     |
| <b>10.4</b> | <b>Safeguards against optical radiation from lamps and lamp systems (including LED types)</b> |                           | P       |
| 10.4.1      | General requirements                                                                          | LED indication light :RS1 | P       |
|             | Instructional safeguard provided for accessible radiation level needs to exceed               |                           | N/A     |
|             | Risk group marking and location .....                                                         |                           | N/A     |
|             | Information for safe operation and installation                                               |                           | N/A     |
| 10.4.2      | Requirements for enclosures                                                                   |                           | N/A     |
|             | UV radiation exposure .....                                                                   |                           | N/A     |
| 10.4.3      | Instructional safeguard .....                                                                 |                           | N/A     |
| <b>10.5</b> | <b>Safeguards against X-radiation</b>                                                         |                           | N/A     |
| 10.5.1      | Requirements                                                                                  |                           | N/A     |
|             | Instructional safeguard for skilled persons .....                                             |                           | —       |
| 10.5.3      | Maximum radiation (pA/kg) .....                                                               |                           | —       |
| <b>10.6</b> | <b>Safeguards against acoustic energy sources</b>                                             |                           | N/A     |
| 10.6.1      | General                                                                                       |                           | N/A     |
| 10.6.2      | Classification                                                                                |                           | N/A     |
|             | Acoustic output $L_{Aeq,T}$ , dB(A) .....                                                     |                           | N/A     |
|             | Unweighted RMS output voltage (mV) .....                                                      |                           | N/A     |
|             | Digital output signal (dBFS) .....                                                            |                           | N/A     |
| 10.6.3      | Requirements for dose-based systems                                                           |                           | N/A     |
| 10.6.3.1    | General requirements                                                                          |                           | N/A     |

| IEC 62368-1 |                                                                  |                 |         |
|-------------|------------------------------------------------------------------|-----------------|---------|
| Clause      | Requirement + Test                                               | Result - Remark | Verdict |
| 10.6.3.2    | Dose-based warning and automatic decrease                        |                 | N/A     |
| 10.6.3.3    | Exposure-based warning and requirements                          |                 | N/A     |
|             | 30 s integrated exposure level (MEL30) .....                     |                 | N/A     |
|             | Warning for MEL $\geq 100$ dB(A) .....                           |                 | N/A     |
| 10.6.4      | Measurement methods                                              |                 | N/A     |
| 10.6.5      | Protection of persons                                            |                 | N/A     |
|             | Instructional safeguards .....                                   |                 | N/A     |
| 10.6.6      | Requirements for listening devices (headphones, earphones, etc.) |                 | N/A     |
| 10.6.6.1    | Corded listening devices with analogue input                     |                 | N/A     |
|             | Listening device input voltage (mV).....                         |                 | N/A     |
| 10.6.6.2    | Corded listening devices with digital input                      |                 | N/A     |
|             | Max. acoustic output $L_{Aeq,T}$ , dB(A) .....                   |                 | N/A     |
| 10.6.6.3    | Cordless listening devices                                       |                 | N/A     |
|             | Max. acoustic output $L_{Aeq,T}$ , dB(A) .....                   |                 | N/A     |

|            |                                                                                                              |                                                      |     |
|------------|--------------------------------------------------------------------------------------------------------------|------------------------------------------------------|-----|
| <b>B</b>   | <b>NORMAL OPERATING CONDITION TESTS, ABNORMAL OPERATING CONDITION TESTS AND SINGLE FAULT CONDITION TESTS</b> |                                                      | P   |
| <b>B.1</b> | <b>General</b>                                                                                               |                                                      | P   |
| B.1.5      | Temperature measurement conditions                                                                           | (See appended table B.1.5)                           | P   |
| <b>B.2</b> | <b>Normal operating conditions</b>                                                                           |                                                      | P   |
| B.2.1      | General requirements .....                                                                                   | (See Test Item Particulars and appended test tables) | P   |
|            | Audio Amplifiers and equipment with audio amplifiers .....                                                   | See annex E.                                         | P   |
| B.2.3      | Supply voltage and tolerances                                                                                | +10% and -10% for a.c. mains.                        | P   |
| B.2.5      | Input test .....                                                                                             | (See appended table B.2.5)                           | P   |
| <b>B.3</b> | <b>Simulated abnormal operating conditions</b>                                                               |                                                      | P   |
| B.3.1      | General                                                                                                      | (See appended tables B.3, B.4)                       | P   |
| B.3.2      | Covering of ventilation openings                                                                             | (See appended tables B.3, B.4)                       | P   |
|            | Instructional safeguard .....                                                                                | TS1                                                  | N/A |
| B.3.3      | DC mains polarity test                                                                                       |                                                      | N/A |

| IEC 62368-1 |                                                                            |                                |         |
|-------------|----------------------------------------------------------------------------|--------------------------------|---------|
| Clause      | Requirement + Test                                                         | Result - Remark                | Verdict |
| B.3.4       | Setting of voltage selector                                                |                                | N/A     |
| B.3.5       | Maximum load at output terminals                                           | (See appended table B.3, B.4)  | P       |
| B.3.6       | Reverse battery polarity                                                   |                                | N/A     |
| B.3.7       | Audio amplifier abnormal operating conditions                              |                                | N/A     |
| B.3.8       | Safeguards functional during and after abnormal operating conditions ..... | (See appended tables B.3, B.4) | P       |
| <b>B.4</b>  | <b>Simulated single fault conditions</b>                                   |                                | P       |
| B.4.1       | General                                                                    |                                | P       |
| B.4.2       | Temperature controlling device                                             | No such devices.               | N/A     |
| B.4.3       | Blocked motor test                                                         | No motor used.                 | N/A     |
| B.4.4       | Functional insulation                                                      | (See appended tables B.3, B.4) | P       |
| B.4.4.1     | Short circuit of clearances for functional insulation                      |                                | P       |
| B.4.4.2     | Short circuit of creepage distances for functional insulation              |                                | P       |
| B.4.4.3     | Short circuit of functional insulation on coated printed boards            |                                | N/A     |
| B.4.5       | Short-circuit and interruption of electrodes in tubes and semiconductors   |                                | N/A     |
| B.4.6       | Short circuit or disconnection of passive components                       |                                | P       |
| B.4.7       | Continuous operation of components                                         |                                | N/A     |
| B.4.8       | Compliance during and after single fault conditions .....                  | (See appended table B.3, B.4)  | P       |
| B.4.9       | Battery charging and discharging under single fault conditions             |                                | N/A     |
| <b>C</b>    | <b>UV RADIATION</b>                                                        |                                | N/A     |
| <b>C.1</b>  | <b>Protection of materials in equipment from UV radiation</b>              |                                | N/A     |
| C.1.2       | Requirements                                                               |                                | N/A     |
| C.1.3       | Test method                                                                |                                | N/A     |
| <b>C.2</b>  | <b>UV light conditioning test</b>                                          |                                | N/A     |
| C.2.1       | Test apparatus.....                                                        |                                | N/A     |
| C.2.2       | Mounting of test samples                                                   |                                | N/A     |
| C.2.3       | Carbon-arc light-exposure test                                             |                                | N/A     |
| C.2.4       | Xenon-arc light-exposure test                                              |                                | N/A     |

| IEC 62368-1    |                                                                       |                                                                        |         |
|----------------|-----------------------------------------------------------------------|------------------------------------------------------------------------|---------|
| Clause         | Requirement + Test                                                    |                                                                        | Verdict |
| <b>D</b>       | <b>TEST GENERATORS</b>                                                |                                                                        | N/A     |
| <b>D.1</b>     | <b>Impulse test generators</b>                                        |                                                                        | N/A     |
| <b>D.2</b>     | <b>Antenna interface test generator</b>                               |                                                                        | N/A     |
| <b>D.3</b>     | <b>Electronic pulse generator</b>                                     |                                                                        | N/A     |
| <b>E</b>       | <b>TEST CONDITIONS FOR EQUIPMENT CONTAINING AUDIO AMPLIFIERS</b>      |                                                                        | P       |
| <b>E.1</b>     | <b>Electrical energy source classification for audio signals</b>      |                                                                        | P       |
|                | Maximum non-clipped output power (W)..... :                           |                                                                        | —       |
|                | Rated load impedance ( $\Omega$ ) .....                               |                                                                        | —       |
|                | Open-circuit output voltage (V)..... :                                |                                                                        | —       |
|                | Instructional safeguard .....                                         |                                                                        | —       |
| <b>E.2</b>     | <b>Audio amplifier normal operating conditions</b>                    |                                                                        | P       |
|                | Audio signal source type .....                                        | 1KHz                                                                   | —       |
|                | Audio output power (W)..... :                                         | Normal test with maximum volume.                                       | —       |
|                | Audio output voltage (V) .....                                        |                                                                        | —       |
|                | Rated load impedance ( $\Omega$ ) .....                               |                                                                        | —       |
|                | Requirements for temperature measurement                              | See appended table 5.4.1.4, 9.3, B.1.5, B.2.6                          | P       |
| <b>E.3</b>     | <b>Audio amplifier abnormal operating conditions</b>                  |                                                                        | P       |
| <b>F</b>       | <b>EQUIPMENT MARKINGS, INSTRUCTIONS, AND INSTRUCTIONAL SAFEGUARDS</b> |                                                                        | P       |
| <b>F.1</b>     | <b>General</b>                                                        |                                                                        | P       |
|                | Language .....                                                        | English, German, French, Spanish, Polish, Italian                      | —       |
| <b>F.2</b>     | <b>Letter symbols and graphical symbols</b>                           |                                                                        | P       |
| <b>F.2.1</b>   | Letter symbols according to IEC60027-1                                |                                                                        | P       |
| <b>F.2.2</b>   | Graphic symbols according to IEC, ISO or manufacturer specific        |                                                                        | P       |
| <b>F.3</b>     | <b>Equipment markings</b>                                             |                                                                        | P       |
| <b>F.3.1</b>   | Equipment marking locations                                           | The equipment marking is located on the surface and is easily visible. | P       |
| <b>F.3.2</b>   | Equipment identification markings                                     | See below.                                                             | P       |
| <b>F.3.2.1</b> | Manufacturer identification .....                                     | See copy of marking plate                                              | P       |

| IEC 62368-1 |                                                           |                                                                                                                                                                                    |         |
|-------------|-----------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------|
| Clause      | Requirement + Test                                        | Result - Remark                                                                                                                                                                    | Verdict |
| F.3.2.2     | Model identification .....                                | See copy of marking plate                                                                                                                                                          | P       |
| F.3.3       | Equipment rating markings                                 | See below.                                                                                                                                                                         | P       |
| F.3.3.1     | Equipment with direct connection to mains                 |                                                                                                                                                                                    | N/A     |
| F.3.3.2     | Equipment without direct connection to mains              |                                                                                                                                                                                    | P       |
| F.3.3.3     | Nature of the supply voltage .....                        | See copy of marking plate                                                                                                                                                          | P       |
| F.3.3.4     | Rated voltage.....                                        | See copy of marking plate                                                                                                                                                          | P       |
| F.3.3.5     | Rated frequency .....                                     |                                                                                                                                                                                    | N/A     |
| F.3.3.6     | Rated current or rated power.....                         | See copy of marking plate                                                                                                                                                          | P       |
| F.3.3.7     | Equipment with multiple supply connections                | Only one connection.                                                                                                                                                               | P       |
| F.3.4       | Voltage setting device                                    | No voltage setting device.                                                                                                                                                         | P       |
| F.3.5       | Terminals and operating devices                           | See below.                                                                                                                                                                         | P       |
| F.3.5.1     | Mains appliance outlet and socket-outlet markings .....   |                                                                                                                                                                                    | N/A     |
| F.3.5.2     | Switch position identification marking.....               |                                                                                                                                                                                    | N/A     |
| F.3.5.3     | Replacement fuse identification and rating markings ..... | The fuse is located within the equipment and not replaceable by an ordinary person or an instructed person.<br><br>The fuse marking is marked on PCB near fuse: F1<br>T0.5A 250Vac | N/A     |
|             | Instructional safeguards for neutral fuse .....           |                                                                                                                                                                                    | N/A     |
| F.3.5.4     | Replacement battery identification marking .....          |                                                                                                                                                                                    | N/A     |
| F.3.5.5     | Neutral conductor terminal                                | Not permanently connected equipment                                                                                                                                                | N/A     |
| F.3.5.6     | Terminal marking location                                 |                                                                                                                                                                                    | N/A     |
| F.3.6       | Equipment markings related to equipment classification    |                                                                                                                                                                                    | N/A     |
| F.3.6.1     | Class I equipment                                         |                                                                                                                                                                                    | N/A     |
| F.3.6.1.1   | Protective earthing conductor terminal.....               |                                                                                                                                                                                    | N/A     |
| F.3.6.1.2   | Protective bonding conductor terminals .....              |                                                                                                                                                                                    | N/A     |
| F.3.6.2     | Equipment class marking .....                             |                                                                                                                                                                                    | N/A     |
| F.3.6.3     | Functional earthing terminal marking .....                |                                                                                                                                                                                    | N/A     |
| F.3.7       | Equipment IP rating marking .....                         | IPX0                                                                                                                                                                               | N/A     |

| IEC 62368-1 |                                                                            |                                                                                                                                                         |         |
|-------------|----------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------|---------|
| Clause      | Requirement + Test                                                         | Result - Remark                                                                                                                                         | Verdict |
| F.3.8       | External power supply output marking .....                                 |                                                                                                                                                         | N/A     |
| F.3.9       | Durability, legibility and permanence of marking                           | All markings required are easily discernible under normal lighting conditions.                                                                          | P       |
| F.3.10      | Test for permanence of markings                                            | After rubbing test by water and petroleum spirit, the marking still legible; it is not easily possible to remove the marking plate and show no curling. | P       |
| <b>F.4</b>  | <b>Instructions</b>                                                        |                                                                                                                                                         | P       |
|             | a) Information prior to installation and initial use                       |                                                                                                                                                         | P       |
|             | b) Equipment for use in locations where children not likely to be present  |                                                                                                                                                         | N/A     |
|             | c) Instructions for installation and interconnection                       | Provided in user's manual.                                                                                                                              | P       |
|             | d) Equipment intended for use only in restricted access area               |                                                                                                                                                         | N/A     |
|             | e) Equipment intended to be fastened in place                              |                                                                                                                                                         | N/A     |
|             | f) Instructions for audio equipment terminals                              |                                                                                                                                                         | P       |
|             | g) Protective earthing used as a safeguard                                 |                                                                                                                                                         | N/A     |
|             | h) Protective conductor current exceeding ES2 limits                       |                                                                                                                                                         | N/A     |
|             | i) Graphic symbols used on equipment                                       |                                                                                                                                                         | N/A     |
|             | j) Permanently connected equipment not provided with all-pole mains switch |                                                                                                                                                         | N/A     |
|             | k) Replaceable components or modules providing safeguard function          |                                                                                                                                                         | N/A     |
|             | l) Equipment containing insulating liquid                                  |                                                                                                                                                         | N/A     |
|             | m) Installation instructions for outdoor equipment                         |                                                                                                                                                         | N/A     |
| <b>F.5</b>  | Instructional safeguards                                                   |                                                                                                                                                         | N/A     |
| <b>G</b>    | <b>COMPONENTS</b>                                                          |                                                                                                                                                         | P       |
| <b>G.1</b>  | <b>Switches</b>                                                            |                                                                                                                                                         | P       |
| G.1.1       | General                                                                    | The Switches used in the equipment are complied with IEC/EN 61058-1. (See appended table 4.1.2)                                                         | P       |
| G.1.2       | Ratings, endurance, spacing, maximum load                                  |                                                                                                                                                         | N/A     |

| IEC 62368-1 |                                                                                                  |                                                |         |
|-------------|--------------------------------------------------------------------------------------------------|------------------------------------------------|---------|
| Clause      | Requirement + Test                                                                               | Result - Remark                                | Verdict |
| G.1.3       | Test method and compliance                                                                       |                                                | N/A     |
| <b>G.2</b>  | <b>Relays</b>                                                                                    |                                                | N/A     |
| G.2.1       | Requirements                                                                                     |                                                | N/A     |
| G.2.2       | Overload test                                                                                    |                                                | N/A     |
| G.2.3       | Relay controlling connectors supplying power to other equipment                                  |                                                | N/A     |
| G.2.4       | Test method and compliance                                                                       |                                                | N/A     |
| <b>G.3</b>  | <b>Protective devices</b>                                                                        |                                                | P       |
| G.3.1       | Thermal cut-offs                                                                                 |                                                | N/A     |
|             | Thermal cut-outs separately approved according to IEC 60730 with conditions indicated in a) & b) |                                                | N/A     |
|             | Thermal cut-outs tested as part of the equipment as indicated in c)                              |                                                | N/A     |
| G.3.1.2     | Test method and compliance                                                                       |                                                | N/A     |
| G.3.2       | Thermal links                                                                                    |                                                | N/A     |
| G.3.2.1     | a) Thermal links tested separately according to IEC 60691 with specifics                         |                                                | N/A     |
|             | b) Thermal links tested as part of the equipment                                                 |                                                | N/A     |
| G.3.2.2     | Test method and compliance                                                                       |                                                | N/A     |
| G.3.3       | PTC thermistors                                                                                  |                                                | N/A     |
| G.3.4       | Overcurrent protection devices                                                                   |                                                | P       |
| G.3.5       | Safeguards components not mentioned in G.3.1 to G.3.4                                            |                                                | N/A     |
| G.3.5.1     | Non-resettable devices suitably rated and marking provided                                       |                                                | N/A     |
| G.3.5.2     | Single faults conditions..... :                                                                  |                                                | N/A     |
| <b>G.4</b>  | <b>Connectors</b>                                                                                |                                                | P       |
| G.4.1       | Spacings                                                                                         |                                                | P       |
| G.4.2       | Mains connector configuration..... :                                                             | Approved AC inlet used                         | P       |
| G.4.3       | Plug is shaped that insertion into mains socket-outlets or appliance coupler is unlikely         |                                                | N/A     |
| <b>G.5</b>  | <b>Wound components</b>                                                                          |                                                | P       |
| G.5.1       | Wire insulation in wound components                                                              | Approved TIW used for secondary winding of T1. | P       |

| IEC 62368-1 |                                                                   |                                                                                      |         |
|-------------|-------------------------------------------------------------------|--------------------------------------------------------------------------------------|---------|
| Clause      | Requirement + Test                                                | Result - Remark                                                                      | Verdict |
| G.5.1.2     | Protection against mechanical stress                              | Physical separation is provided by tubing on both secondary leads and primary leads. | P       |
| G.5.2       | Endurance test                                                    |                                                                                      | N/A     |
| G.5.2.1     | General test requirements                                         |                                                                                      | N/A     |
| G.5.2.2     | Heat run test                                                     |                                                                                      | N/A     |
|             | Test time (days per cycle) .....                                  |                                                                                      | —       |
|             | Test temperature (°C) .....                                       |                                                                                      | —       |
| G.5.2.3     | Wound components supplied from the mains                          |                                                                                      | N/A     |
| G.5.2.4     | No insulation breakdown                                           |                                                                                      | N/A     |
| G.5.3       | Transformers                                                      |                                                                                      | P       |
| G.5.3.1     | Compliance method.....                                            | The transformers meet the requirements given in G.5.3.2 and G.5.3.3.                 | P       |
|             | Position .....                                                    | T1                                                                                   | P       |
|             | Method of protection .....                                        | Over current protection by circuit design.                                           | P       |
| G.5.3.2     | Insulation                                                        | Primary windings and secondary windings are separated by Reinforced insulation.      | P       |
|             | Protection from displacement of windings.....                     | By core and insulating tape                                                          | —       |
| G.5.3.3     | Transformer overload tests                                        | (See appended tables B.3, B.4)                                                       | N/A     |
| G.5.3.3.1   | Test conditions                                                   |                                                                                      | P       |
| G.5.3.3.2   | Winding temperatures                                              |                                                                                      | P       |
| G.5.3.3.3   | Winding temperatures - alternative test method                    |                                                                                      | N/A     |
| G.5.3.4     | Transformers using FIW                                            |                                                                                      | N/A     |
| G.5.3.4.1   | General                                                           |                                                                                      | N/A     |
|             | FIW wire nominal diameter .....                                   |                                                                                      | —       |
| G.5.3.4.2   | Transformers with basic insulation only                           |                                                                                      | N/A     |
| G.5.3.4.3   | Transformers with double insulation or reinforced insulation..... |                                                                                      | N/A     |
| G.5.3.4.4   | Transformers with FIW wound on metal or ferrite core              |                                                                                      | N/A     |

| IEC 62368-1 |                                                                         |                                                                  |         |
|-------------|-------------------------------------------------------------------------|------------------------------------------------------------------|---------|
| Clause      | Requirement + Test                                                      | Result - Remark                                                  | Verdict |
| G.5.3.4.5   | Thermal cycling test and compliance                                     |                                                                  | N/A     |
| G.5.3.4.6   | Partial discharge test                                                  |                                                                  | N/A     |
| G.5.3.4.7   | Routine test                                                            |                                                                  | N/A     |
| G.5.4       | Motors                                                                  |                                                                  | P       |
| G.5.4.1     | General requirements                                                    |                                                                  | P       |
| G.5.4.2     | Motor overload test conditions                                          |                                                                  | N/A     |
| G.5.4.3     | Running overload test                                                   |                                                                  | N/A     |
| G.5.4.4.2   | Locked-rotor overload test                                              |                                                                  | N/A     |
|             | Test duration (days) .....                                              |                                                                  | —       |
| G.5.4.5     | Running overload test for DC motors                                     |                                                                  | N/A     |
| G.5.4.5.2   | Tested in the unit                                                      |                                                                  | N/A     |
| G.5.4.5.3   | Alternative method                                                      |                                                                  | N/A     |
| G.5.4.6     | Locked-rotor overload test for DC motors                                |                                                                  | P       |
| G.5.4.6.2   | Tested in the unit                                                      |                                                                  | P       |
|             | Maximum Temperature .....                                               |                                                                  | P       |
| G.5.4.6.3   | Alternative method                                                      |                                                                  | N/A     |
| G.5.4.7     | Motors with capacitors                                                  |                                                                  | N/A     |
| G.5.4.8     | Three-phase motors                                                      |                                                                  | N/A     |
| G.5.4.9     | Series motors                                                           |                                                                  | N/A     |
|             | Operating voltage .....                                                 |                                                                  | —       |
| <b>G.6</b>  | <b>Wire Insulation</b>                                                  |                                                                  | P       |
| G.6.1       | General                                                                 | Approved insulated wires comply with Annex J.                    | P       |
| G.6.2       | Enamelled winding wire insulation                                       | Solvent-based enamel winding is not considered basic insulation. | N/A     |
| <b>G.7</b>  | <b>Mains supply cords</b>                                               |                                                                  | N/A     |
| G.7.1       | General requirements                                                    |                                                                  | N/A     |
|             | Type .....                                                              |                                                                  | —       |
| G.7.2       | Cross sectional area (mm <sup>2</sup> or AWG) .....                     |                                                                  | N/A     |
| G.7.3       | Cord anchorages and strain relief for non-detachable power supply cords |                                                                  | N/A     |
| G.7.3.2     | Cord strain relief                                                      |                                                                  | N/A     |

| IEC 62368-1 |                                                                    |                 |         |
|-------------|--------------------------------------------------------------------|-----------------|---------|
| Clause      | Requirement + Test                                                 | Result - Remark | Verdict |
| G.7.3.2.1   | Requirements                                                       |                 | N/A     |
|             | Strain relief test force (N)..... :                                |                 | N/A     |
| G.7.3.2.2   | Strain relief mechanism failure                                    |                 | N/A     |
| G.7.3.2.3   | Cord sheath or jacket position, distance (mm) ..... :              |                 | N/A     |
| G.7.3.2.4   | Strain relief and cord anchorage material                          |                 | N/A     |
| G.7.4       | Cord Entry                                                         |                 | N/A     |
| G.7.5       | Non-detachable cord bend protection                                |                 | N/A     |
| G.7.5.1     | Requirements                                                       |                 | N/A     |
| G.7.5.2     | Test method and compliance                                         |                 | N/A     |
|             | Overall diameter or minor overall dimension, <i>D</i> (mm) ..... : |                 | —       |
|             | Radius of curvature after test (mm) ..... :                        |                 | —       |
| G.7.6       | Supply wiring space                                                |                 | N/A     |
| G.7.6.1     | General requirements                                               |                 | N/A     |
| G.7.6.2     | Stranded wire                                                      |                 | N/A     |
| G.7.6.2.1   | Requirements                                                       |                 | N/A     |
| G.7.6.2.2   | Test with 8 mm strand                                              |                 | N/A     |
| <b>G.8</b>  | <b>Varistors</b>                                                   |                 | N/A     |
| G.8.1       | General requirements                                               |                 | N/A     |
| G.8.2       | Safeguards against fire                                            |                 | N/A     |
| G.8.2.1     | General                                                            |                 | N/A     |
| G.8.2.2     | Varistor overload test                                             |                 | N/A     |
| G.8.2.3     | Temporary overvoltage test                                         |                 | N/A     |
| <b>G.9</b>  | <b>Integrated circuit (IC) current limiters</b>                    |                 | N/A     |
| G.9.1       | Requirements                                                       |                 | N/A     |
|             | IC limiter output current (max. 5A)..... :                         |                 | —       |
|             | Manufacturers' defined drift ..... :                               |                 | —       |
| G.9.2       | Test Program                                                       |                 | N/A     |
| G.9.3       | Compliance                                                         |                 | N/A     |
| <b>G.10</b> | <b>Resistors</b>                                                   |                 | N/A     |
| G.10.1      | General                                                            |                 | N/A     |
| G.10.2      | Conditioning                                                       |                 | N/A     |

| IEC 62368-1 |                                                         |                 |         |
|-------------|---------------------------------------------------------|-----------------|---------|
| Clause      | Requirement + Test                                      | Result - Remark | Verdict |
| G.10.3      | Resistor test                                           |                 | N/A     |
| G.10.4      | Voltage surge test                                      |                 | N/A     |
| G.10.5      | Impulse test                                            |                 | N/A     |
| G.10.6      | Overload test                                           |                 | N/A     |
| <b>G.11</b> | <b>Capacitors and RC units</b>                          |                 | N/A     |
| G.11.1      | General requirements                                    |                 | N/A     |
| G.11.2      | Conditioning of capacitors and RC units                 |                 | N/A     |
| G.11.3      | Rules for selecting capacitors                          |                 | N/A     |
| <b>G.12</b> | <b>Optocouplers</b>                                     |                 | N/A     |
|             | Optocouplers comply with IEC 60747-5-5 with specifics   |                 | N/A     |
|             | Type test voltage $V_{ini,a}$ ..... :                   |                 | —       |
|             | Routine test voltage, $V_{ini,b}$ ..... :               |                 | —       |
| <b>G.13</b> | <b>Printed boards</b>                                   |                 | P       |
| G.13.1      | General requirements                                    |                 | P       |
| G.13.2      | Uncoated printed boards                                 |                 | P       |
| G.13.3      | Coated printed boards                                   |                 | N/A     |
| G.13.4      | Insulation between conductors on the same inner surface |                 | N/A     |
| G.13.5      | Insulation between conductors on different surfaces     |                 | N/A     |
|             | Distance through insulation ..... :                     |                 | N/A     |
|             | Number of insulation layers (pcs) ..... :               |                 | —       |
| G.13.6      | Tests on coated printed boards                          |                 | N/A     |
| G.13.6.1    | Sample preparation and preliminary inspection           |                 | N/A     |
| G.13.6.2    | Test method and compliance                              |                 | N/A     |
| <b>G.14</b> | <b>Coating on components terminals</b>                  |                 | N/A     |
| G.14.1      | Requirements ..... :                                    |                 | N/A     |
| <b>G.15</b> | <b>Pressurized liquid filled components</b>             |                 | N/A     |
| G.15.1      | Requirements                                            |                 | N/A     |
| G.15.2      | Test methods and compliance                             |                 | N/A     |
| G.15.2.1    | Hydrostatic pressure test                               |                 | N/A     |
| G.15.2.2    | Creep resistance test                                   |                 | N/A     |
| G.15.2.3    | Tubing and fittings compatibility test                  |                 | N/A     |

| IEC 62368-1 |                                                                                                    |                 |         |
|-------------|----------------------------------------------------------------------------------------------------|-----------------|---------|
| Clause      | Requirement + Test                                                                                 | Result - Remark | Verdict |
| G.15.2.4    | Vibration test                                                                                     |                 | N/A     |
| G.15.2.5    | Thermal cycling test                                                                               |                 | N/A     |
| G.15.2.6    | Force test                                                                                         |                 | N/A     |
| G.15.3      | Compliance                                                                                         |                 | N/A     |
| <b>G.16</b> | <b>IC including capacitor discharge function (ICX)</b>                                             |                 | N/A     |
| G.16.1      | Condition for fault tested is not required                                                         |                 | N/A     |
|             | ICX with associated circuitry tested in equipment                                                  |                 | N/A     |
|             | ICX tested separately                                                                              |                 | N/A     |
| G.16.2      | Tests                                                                                              |                 | N/A     |
|             | Smallest capacitance and smallest resistance specified by ICX manufacturer for impulse test..... : |                 | —       |
|             | Mains voltage that impulses to be superimposed on ..... :                                          |                 | —       |
|             | Largest capacitance and smallest resistance for ICX tested by itself for 10000 cycles test ..... : |                 | —       |
| G.16.3      | Capacitor discharge test..... :                                                                    |                 | N/A     |
| <b>H</b>    | <b>CRITERIA FOR TELEPHONE RINGING SIGNALS</b>                                                      |                 | N/A     |
| <b>H.1</b>  | <b>General</b>                                                                                     |                 | N/A     |
| <b>H.2</b>  | <b>Method A</b>                                                                                    |                 | N/A     |
| <b>H.3</b>  | <b>Method B</b>                                                                                    |                 | N/A     |
| H.3.1       | Ringing signal                                                                                     |                 | N/A     |
| H.3.1.1     | Frequency (Hz) ..... :                                                                             |                 | —       |
| H.3.1.2     | Voltage (V) ..... :                                                                                |                 | —       |
| H.3.1.3     | Cadence; time (s) and voltage (V) ..... :                                                          |                 | —       |
| H.3.1.4     | Single fault current (mA): ..... :                                                                 |                 | —       |
| H.3.2       | Tripping device and monitoring voltage                                                             |                 | N/A     |
| H.3.2.1     | Conditions for use of a tripping device or a monitoring voltage                                    |                 | N/A     |
| H.3.2.2     | Tripping device                                                                                    |                 | N/A     |
| H.3.2.3     | Monitoring voltage (V) ..... :                                                                     |                 | N/A     |
| <b>J</b>    | <b>INSULATED WINDING WIRES FOR USE WITHOUT INTERLEAVED INSULATION</b>                              |                 | P       |
| <b>J.1</b>  | <b>General</b>                                                                                     |                 | P       |

| IEC 62368-1    |                                                                                                               |                                                             |         |
|----------------|---------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------|---------|
| Clause         | Requirement + Test                                                                                            | Result - Remark                                             | Verdict |
|                | Winding wire insulation ..... :                                                                               | Approved insulated wire used.<br>(See appended table 4.1.2) | —       |
|                | Solid round winding wire, diameter (mm) ..... :                                                               |                                                             | N/A     |
|                | Solid square and rectangular (flatwise bending) winding wire, cross-sectional area (mm <sup>2</sup> ) ..... : |                                                             | N/A     |
| <b>J.2/J.3</b> | Tests and Manufacturing                                                                                       | (See separate test report)                                  | —       |
| <b>K</b>       | <b>SAFETY INTERLOCKS</b>                                                                                      |                                                             | N/A     |
| <b>K.1</b>     | <b>General requirements</b>                                                                                   |                                                             | N/A     |
|                | Instructional safeguard ..... :                                                                               |                                                             | N/A     |
| <b>K.2</b>     | <b>Components of safety interlock safeguard mechanism</b>                                                     |                                                             | N/A     |
| <b>K.3</b>     | <b>Inadvertent change of operating mode</b>                                                                   |                                                             | N/A     |
| <b>K.4</b>     | <b>Interlock safeguard override</b>                                                                           |                                                             | N/A     |
| <b>K.5</b>     | <b>Fail-safe</b>                                                                                              |                                                             | N/A     |
| K.5.1          | Under single fault condition                                                                                  |                                                             | N/A     |
| <b>K.6</b>     | <b>Mechanically operated safety interlocks</b>                                                                |                                                             | N/A     |
| K.6.1          | Endurance requirement                                                                                         |                                                             | N/A     |
| K.6.2          | Test method and compliance ..... :                                                                            |                                                             | N/A     |
| <b>K.7</b>     | <b>Interlock circuit isolation</b>                                                                            |                                                             | N/A     |
| K.7.1          | Separation distance for contact gaps & interlock circuit elements                                             |                                                             | N/A     |
|                | In circuit connected to mains, separation distance for contact gaps (mm) ..... :                              |                                                             | N/A     |
|                | In circuit isolated from mains, separation distance for contact gaps (mm) ..... :                             |                                                             | N/A     |
|                | Electric strength test before and after the test of K.7.2 ..... :                                             |                                                             | N/A     |
| K.7.2          | Overload test, Current (A) ..... :                                                                            |                                                             | N/A     |
| K.7.3          | Endurance test                                                                                                |                                                             | N/A     |
| K.7.4          | Electric strength test                                                                                        |                                                             | N/A     |
| <b>L</b>       | <b>DISCONNECT DEVICES</b>                                                                                     |                                                             | P       |
| <b>L.1</b>     | <b>General requirements</b>                                                                                   | Plug used for disconnect device                             | P       |
| <b>L.2</b>     | <b>Permanently connected equipment</b>                                                                        |                                                             | N/A     |

| IEC 62368-1 |                                                                                            |                                                                  |         |
|-------------|--------------------------------------------------------------------------------------------|------------------------------------------------------------------|---------|
| Clause      | Requirement + Test                                                                         | Result - Remark                                                  | Verdict |
| <b>L.3</b>  | <b>Parts that remain energized</b>                                                         | No accessible parts on the supply side of the disconnect device. | P       |
| <b>L.4</b>  | <b>Single-phase equipment</b>                                                              | The disconnect device disconnect both poles simultaneously.      | P       |
| <b>L.5</b>  | <b>Three-phase equipment</b>                                                               |                                                                  | N/A     |
| <b>L.6</b>  | <b>Switches as disconnect devices</b>                                                      |                                                                  | N/A     |
| <b>L.7</b>  | <b>Plugs as disconnect devices</b>                                                         |                                                                  | P       |
| <b>L.8</b>  | <b>Multiple power sources</b>                                                              |                                                                  | N/A     |
|             | Instructional safeguard .....                                                              |                                                                  | N/A     |
| <b>M</b>    | <b>EQUIPMENT CONTAINING BATTERIES AND THEIR PROTECTION CIRCUITS</b>                        |                                                                  | N/A     |
| <b>M.1</b>  | <b>General requirements</b>                                                                |                                                                  | N/A     |
| <b>M.2</b>  | <b>Safety of batteries and their cells</b>                                                 |                                                                  | N/A     |
| M.2.1       | Batteries and their cells comply with relevant IEC standards .....                         |                                                                  | N/A     |
| <b>M.3</b>  | <b>Protection circuits for batteries provided within the equipment</b>                     |                                                                  | N/A     |
| M.3.1       | Requirements                                                                               |                                                                  | N/A     |
| M.3.2       | Test method                                                                                |                                                                  | N/A     |
|             | Overcharging of a rechargeable battery                                                     |                                                                  | N/A     |
|             | Excessive discharging                                                                      |                                                                  | N/A     |
|             | Unintentional charging of a non-rechargeable battery                                       |                                                                  | N/A     |
|             | Reverse charging of a rechargeable battery                                                 |                                                                  | N/A     |
| M.3.3       | Compliance                                                                                 |                                                                  | N/A     |
| <b>M.4</b>  | <b>Additional safeguards for equipment containing a portable secondary lithium battery</b> |                                                                  | N/A     |
| M.4.1       | General                                                                                    |                                                                  | N/A     |
| M.4.2       | Charging safeguards                                                                        |                                                                  | N/A     |
| M.4.2.1     | Requirements                                                                               |                                                                  | N/A     |
| M.4.2.2     | Compliance .....                                                                           |                                                                  | N/A     |
| M.4.3       | Fire enclosure .....                                                                       |                                                                  | N/A     |
| M.4.4       | Drop test of equipment containing a secondary lithium battery                              |                                                                  | N/A     |

| IEC 62368-1 |                                                                                                               |                 |         |
|-------------|---------------------------------------------------------------------------------------------------------------|-----------------|---------|
| Clause      | Requirement + Test                                                                                            | Result - Remark | Verdict |
| M.4.4.2     | Preparation and procedure for the drop test                                                                   |                 | N/A     |
| M.4.4.3     | Drop, Voltage on reference and dropped batteries (V); voltage difference during 24 h period (%): ..... :      |                 | N/A     |
| M.4.4.4     | Check of the charge/discharge function                                                                        |                 | N/A     |
| M.4.4.5     | Charge / discharge cycle test                                                                                 |                 | N/A     |
| M.4.4.6     | Compliance                                                                                                    |                 | N/A     |
| <b>M.5</b>  | <b>Risk of burn due to short-circuit during carrying</b>                                                      |                 | N/A     |
| M.5.1       | Requirement                                                                                                   |                 | N/A     |
| M.5.2       | Test method and compliance                                                                                    |                 | N/A     |
| <b>M.6</b>  | <b>Safeguards against short-circuits</b>                                                                      |                 | N/A     |
| M.6.1       | External and internal faults                                                                                  |                 | N/A     |
| M.6.2       | Compliance                                                                                                    |                 | N/A     |
| <b>M.7</b>  | <b>Risk of explosion from lead acid and NiCd batteries</b>                                                    |                 | N/A     |
| M.7.1       | Ventilation preventing explosive gas concentration                                                            |                 | N/A     |
|             | Calculated hydrogen generation rate ..... :                                                                   |                 | N/A     |
| M.7.2       | Test method and compliance                                                                                    |                 | N/A     |
|             | Minimum air flow rate, Q (m <sup>3</sup> /h) ..... :                                                          |                 | N/A     |
| M.7.3       | Ventilation tests                                                                                             |                 | N/A     |
| M.7.3.1     | General                                                                                                       |                 | N/A     |
| M.7.3.2     | Ventilation test – alternative 1                                                                              |                 | N/A     |
|             | Hydrogen gas concentration (%) ..... :                                                                        |                 | N/A     |
| M.7.3.3     | Ventilation test – alternative 2                                                                              |                 | N/A     |
|             | Obtained hydrogen generation rate ..... :                                                                     |                 | N/A     |
| M.7.3.4     | Ventilation test – alternative 3                                                                              |                 | N/A     |
|             | Hydrogen gas concentration (%) ..... :                                                                        |                 | N/A     |
| M.7.4       | Marking ..... :                                                                                               |                 | N/A     |
| <b>M.8</b>  | <b>Protection against internal ignition from external spark sources of batteries with aqueous electrolyte</b> |                 | N/A     |
| M.8.1       | General                                                                                                       |                 | N/A     |
| M.8.2       | Test method                                                                                                   |                 | N/A     |
| M.8.2.1     | General                                                                                                       |                 | N/A     |
| M.8.2.2     | Estimation of hypothetical volume V <sub>z</sub> (m <sup>3</sup> /s)..... :                                   |                 | —       |
| M.8.2.3     | Correction factors ..... :                                                                                    |                 | —       |

| IEC 62368-1 |                                                                                         |                                                                                                                  |         |
|-------------|-----------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------|---------|
| Clause      | Requirement + Test                                                                      | Result - Remark                                                                                                  | Verdict |
| M.8.2.4     | Calculation of distance $d$ (mm) .....                                                  |                                                                                                                  | —       |
| <b>M.9</b>  | <b>Preventing electrolyte spillage</b>                                                  |                                                                                                                  | N/A     |
| M.9.1       | Protection from electrolyte spillage                                                    |                                                                                                                  | N/A     |
| M.9.2       | Tray for preventing electrolyte spillage                                                |                                                                                                                  | N/A     |
| <b>M.10</b> | Instructions to prevent reasonably foreseeable misuse                                   |                                                                                                                  | N/A     |
|             | Instructional safeguard .....                                                           |                                                                                                                  | N/A     |
| <b>N</b>    | <b>ELECTROCHEMICAL POTENTIALS</b>                                                       |                                                                                                                  | N/A     |
|             | Material(s) used .....                                                                  |                                                                                                                  | —       |
| <b>O</b>    | <b>MEASUREMENT OF CREEPAGE DISTANCES AND CLEARANCES</b>                                 |                                                                                                                  | P       |
|             | Value of $X$ (mm).....                                                                  | Complied.                                                                                                        | —       |
| <b>P</b>    | <b>SAFEGUARDS AGAINST CONDUCTIVE OBJECTS</b>                                            |                                                                                                                  | P       |
| <b>P.1</b>  | <b>General</b>                                                                          |                                                                                                                  | P       |
| <b>P.2</b>  | <b>Safeguards against entry or consequences of entry of a foreign object</b>            |                                                                                                                  | P       |
| P.2.1       | General                                                                                 |                                                                                                                  | P       |
| P.2.2       | Safeguards against entry of a foreign object                                            |                                                                                                                  | N/A     |
|             | Location and Dimensions (mm) .....                                                      |                                                                                                                  | —       |
| P.2.3       | Safeguards against the consequences of entry of a foreign object                        | Within the projected volume as depicted in Figure P.3 there are no bare conductive parts of ES3 or PS3 circuits. | P       |
| P.2.3.1     | Safeguard requirements                                                                  |                                                                                                                  | N/A     |
|             | The ES3 and PS3 keep-out volume in Figure P.3 not applicable to transportable equipment |                                                                                                                  | N/A     |
|             | Transportable equipment with metalized plastic parts.....                               |                                                                                                                  | N/A     |
| P.2.3.2     | Consequence of entry test.....                                                          |                                                                                                                  | N/A     |
| <b>P.3</b>  | <b>Safeguards against spillage of internal liquids</b>                                  |                                                                                                                  | N/A     |
| P.3.1       | General                                                                                 |                                                                                                                  | N/A     |
| P.3.2       | Determination of spillage consequences                                                  |                                                                                                                  | N/A     |
| P.3.3       | Spillage safeguards                                                                     |                                                                                                                  | N/A     |
| P.3.4       | Compliance                                                                              |                                                                                                                  | N/A     |
| <b>P.4</b>  | <b>Metallized coatings and adhesives securing parts</b>                                 |                                                                                                                  | N/A     |
| P.4.1       | General                                                                                 |                                                                                                                  | N/A     |

| IEC 62368-1 |                                                                                                                                           |                          |            |
|-------------|-------------------------------------------------------------------------------------------------------------------------------------------|--------------------------|------------|
| Clause      | Requirement + Test                                                                                                                        | Result - Remark          | Verdict    |
| P.4.2       | Tests                                                                                                                                     |                          | N/A        |
|             | Conditioning, T <sub>c</sub> (°C) .....                                                                                                   |                          | —          |
|             | Duration (weeks).....                                                                                                                     |                          | —          |
| <b>Q</b>    | <b>CIRCUITS INTENDED FOR INTERCONNECTION WITH BUILDING WIRING</b>                                                                         |                          | <b>P</b>   |
| <b>Q.1</b>  | <b>Limited power sources</b>                                                                                                              |                          | <b>P</b>   |
| Q.1.1       | Requirements                                                                                                                              |                          | P          |
|             | a) Inherently limited output                                                                                                              | (See appended table Q.1) | P          |
|             | b) Impedance limited output                                                                                                               |                          | N/A        |
|             | c) Regulating network limited output                                                                                                      |                          | N/A        |
|             | d) Overcurrent protective device limited output                                                                                           |                          | N/A        |
|             | e) IC current limiter complying with G.9                                                                                                  |                          | N/A        |
| Q.1.2       | Test method and compliance .....                                                                                                          | (See appended table Q.1) | P          |
|             | Current rating of overcurrent protective device (A) .....                                                                                 |                          | N/A        |
| <b>Q.2</b>  | <b>Test for external circuits – paired conductor cable</b>                                                                                |                          | <b>N/A</b> |
|             | Maximum output current (A) .....                                                                                                          |                          | N/A        |
|             | Current limiting method .....                                                                                                             |                          | —          |
| <b>R</b>    | <b>LIMITED SHORT CIRCUIT TEST</b>                                                                                                         |                          | <b>N/A</b> |
| <b>R.1</b>  | <b>General</b>                                                                                                                            |                          | <b>N/A</b> |
| <b>R.2</b>  | <b>Test setup</b>                                                                                                                         |                          | <b>N/A</b> |
|             | Overcurrent protective device for test.....                                                                                               |                          | —          |
| <b>R.3</b>  | <b>Test method</b>                                                                                                                        |                          | <b>N/A</b> |
|             | Cord/cable used for test .....                                                                                                            |                          | —          |
| <b>R.4</b>  | <b>Compliance</b>                                                                                                                         |                          | <b>N/A</b> |
| <b>S</b>    | <b>TESTS FOR RESISTANCE TO HEAT AND FIRE</b>                                                                                              |                          | <b>N/A</b> |
| <b>S.1</b>  | <b>Flammability test for fire enclosures and fire barrier materials of equipment where the steady state power does not exceed 4 000 W</b> |                          | <b>N/A</b> |
|             | Samples, material .....                                                                                                                   |                          | —          |
|             | Wall thickness (mm) .....                                                                                                                 |                          | —          |
|             | Conditioning (°C) .....                                                                                                                   |                          | —          |
|             | Test flame according to IEC 60695-11-5 with conditions as set out                                                                         |                          | N/A        |

| IEC 62368-1 |                                                                                                                                     |                          |         |
|-------------|-------------------------------------------------------------------------------------------------------------------------------------|--------------------------|---------|
| Clause      | Requirement + Test                                                                                                                  | Result - Remark          | Verdict |
|             | - Material not consumed completely                                                                                                  |                          | N/A     |
|             | - Material extinguishes within 30s                                                                                                  |                          | N/A     |
|             | - No burning of layer or wrapping tissue                                                                                            |                          | N/A     |
| <b>S.2</b>  | <b>Flammability test for fire enclosure and fire barrier integrity</b>                                                              |                          | N/A     |
|             | Samples, material .....                                                                                                             |                          | —       |
|             | Wall thickness (mm) .....                                                                                                           |                          | —       |
|             | Conditioning (°C) .....                                                                                                             |                          | —       |
| <b>S.3</b>  | <b>Flammability test for the bottom of a fire enclosure</b>                                                                         |                          | N/A     |
| S.3.1       | Mounting of samples                                                                                                                 |                          | N/A     |
| S.3.2       | Test method and compliance                                                                                                          |                          | N/A     |
|             | Mounting of samples .....                                                                                                           |                          | —       |
|             | Wall thickness (mm) .....                                                                                                           |                          | —       |
| <b>S.4</b>  | <b>Flammability classification of materials</b>                                                                                     |                          | N/A     |
| <b>S.5</b>  | <b>Flammability test for fire enclosures and fire barrier materials of equipment where the steady state power exceeding 4 000 W</b> |                          | N/A     |
|             | Samples, material .....                                                                                                             |                          | —       |
|             | Wall thickness (mm) .....                                                                                                           |                          | —       |
|             | Conditioning (°C) .....                                                                                                             |                          | —       |
| <b>T</b>    | <b>MECHANICAL STRENGTH TESTS</b>                                                                                                    |                          | P       |
| <b>T.1</b>  | <b>General</b>                                                                                                                      |                          | P       |
| <b>T.2</b>  | <b>Steady force test, 10 N .....</b>                                                                                                | (See appended table T.2) | P       |
| <b>T.3</b>  | <b>Steady force test, 30 N .....</b>                                                                                                |                          | N/A     |
| <b>T.4</b>  | <b>Steady force test, 100 N .....</b>                                                                                               |                          | N/A     |
| <b>T.5</b>  | <b>Steady force test, 250 N .....</b>                                                                                               | (See appended table T.5) | P       |
| <b>T.6</b>  | <b>Enclosure impact test</b>                                                                                                        | (See appended table T.6) | P       |
|             | Fall test                                                                                                                           |                          | P       |
|             | Swing test                                                                                                                          |                          | P       |
| <b>T.7</b>  | <b>Drop test .....</b>                                                                                                              |                          | N/A     |
| <b>T.8</b>  | <b>Stress relief test.....</b>                                                                                                      |                          | N/A     |
| <b>T.9</b>  | <b>Glass Impact Test .....</b>                                                                                                      |                          | N/A     |
| <b>T.10</b> | <b>Glass fragmentation test</b>                                                                                                     |                          | N/A     |
|             | Number of particles counted.....                                                                                                    | No such glass provided.  | N/A     |

| IEC 62368-1 |                                                                                                                                               |                                                                                      |         |
|-------------|-----------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------|---------|
| Clause      | Requirement + Test                                                                                                                            |                                                                                      | Verdict |
| <b>T.11</b> | <b>Test for telescoping or rod antennas</b>                                                                                                   |                                                                                      | N/A     |
|             | Torque value (Nm) .....                                                                                                                       | No such antennas provided.                                                           | N/A     |
| <b>U</b>    | <b>MECHANICAL STRENGTH OF CATHODE RAY TUBES (CRT) AND PROTECTION AGAINST THE EFFECTS OF IMPLOSION</b>                                         |                                                                                      | N/A     |
| <b>U.1</b>  | <b>General</b>                                                                                                                                |                                                                                      | N/A     |
|             | Instructional safeguard :                                                                                                                     |                                                                                      | N/A     |
| <b>U.2</b>  | <b>Test method and compliance for non-intrinsically protected CRTs</b>                                                                        |                                                                                      | N/A     |
| <b>U.3</b>  | <b>Protective screen</b>                                                                                                                      |                                                                                      | N/A     |
| <b>V</b>    | <b>DETERMINATION OF ACCESSIBLE PARTS</b>                                                                                                      |                                                                                      | P       |
| <b>V.1</b>  | <b>Accessible parts of equipment</b>                                                                                                          |                                                                                      | P       |
| V.1.1       | General                                                                                                                                       | Following the probes test specified in this annex Figure V.1, V.2, V.5 are suitable. | P       |
| V.1.2       | Surfaces and openings tested with jointed test probes                                                                                         |                                                                                      | P       |
| V.1.3       | Openings tested with straight unjointed test probes                                                                                           |                                                                                      | N/A     |
| V.1.4       | Plugs, jacks, connectors tested with blunt probe                                                                                              |                                                                                      | P       |
| V.1.5       | Slot openings tested with wedge probe                                                                                                         |                                                                                      | N/A     |
| V.1.6       | Terminals tested with rigid test wire                                                                                                         |                                                                                      | P       |
| <b>V.2</b>  | <b>Accessible part criterion</b>                                                                                                              |                                                                                      | N/A     |
| <b>X</b>    | <b>ALTERNATIVE METHOD FOR DETERMINING CLEARANCES FOR INSULATION IN CIRCUITS CONNECTED TO AN AC MAINS NOT EXCEEDING 420 V PEAK (300 V RMS)</b> |                                                                                      | N/A     |
|             | Clearance .....                                                                                                                               |                                                                                      | N/A     |
| <b>Y</b>    | <b>CONSTRUCTION REQUIREMENTS FOR OUTDOOR ENCLOSURES</b>                                                                                       |                                                                                      | N/A     |
| <b>Y.1</b>  | <b>General</b>                                                                                                                                |                                                                                      | N/A     |
| <b>Y.2</b>  | <b>Resistance to UV radiation</b>                                                                                                             |                                                                                      | N/A     |
| <b>Y.3</b>  | <b>Resistance to corrosion</b>                                                                                                                |                                                                                      | N/A     |
| <b>Y.3</b>  | <b>Resistance to corrosion</b>                                                                                                                |                                                                                      | N/A     |
| Y.3.1       | Metallic parts of outdoor enclosures are resistant to effects of water-borne contaminants by .....                                            |                                                                                      | N/A     |
| Y.3.2       | Test apparatus                                                                                                                                |                                                                                      | N/A     |
| Y.3.3       | Water – saturated sulphur dioxide atmosphere                                                                                                  |                                                                                      | N/A     |
| Y.3.4       | Test procedure .....                                                                                                                          |                                                                                      | N/A     |

| IEC 62368-1 |                                                            |                 |         |
|-------------|------------------------------------------------------------|-----------------|---------|
| Clause      | Requirement + Test                                         | Result - Remark | Verdict |
| Y.3.5       | Compliance                                                 |                 | N/A     |
| <b>Y.4</b>  | <b>Gaskets</b>                                             |                 | N/A     |
| Y.4.1       | General                                                    |                 | N/A     |
| Y.4.2       | Gasket tests                                               |                 | N/A     |
| Y.4.3       | Tensile strength and elongation tests                      |                 | N/A     |
|             | Alternative test methods ..... :                           |                 | N/A     |
| Y.4.4       | Compression test                                           |                 | N/A     |
| Y.4.5       | Oil resistance                                             |                 | N/A     |
| Y.4.6       | Securing means                                             |                 | N/A     |
| <b>Y.5</b>  | <b>Protection of equipment within an outdoor enclosure</b> |                 | N/A     |
| Y.5.1       | General                                                    |                 | N/A     |
| Y.5.2       | Protection from moisture                                   |                 | N/A     |
|             | Relevant tests of IEC 60529 or Y.5.3 ..... :               |                 | N/A     |
| Y.5.3       | Water spray test                                           |                 | N/A     |
| Y.5.4       | Protection from plants and vermin                          |                 | N/A     |
| Y.5.5       | Protection from excessive dust                             |                 | N/A     |
| Y.5.5.1     | General                                                    |                 | N/A     |
| Y.5.5.2     | IP5X equipment                                             |                 | N/A     |
| Y.5.5.3     | IP6X equipment                                             |                 | N/A     |
| <b>Y.6</b>  | <b>Mechanical strength of enclosures</b>                   |                 | N/A     |
| Y.6.1       | General                                                    |                 | N/A     |
| Y.6.2       | Impact test ..... :                                        |                 | N/A     |

| IEC 62368-1 |                    |                 |         |
|-------------|--------------------|-----------------|---------|
| Clause      | Requirement + Test | Result - Remark | Verdict |

| 5.2                                                                                           | TABLE: Classification of electrical energy sources |                               |            |                        |                    |                               | P              |
|-----------------------------------------------------------------------------------------------|----------------------------------------------------|-------------------------------|------------|------------------------|--------------------|-------------------------------|----------------|
| Supply Voltage                                                                                | Location (e.g. circuit designation)                | Test conditions               | Parameters |                        |                    |                               | ES Class       |
|                                                                                               |                                                    |                               | U (V)      | I (mA)                 | Type <sup>1)</sup> | Additional Info <sup>2)</sup> |                |
| 264Vac                                                                                        | Primary circuits supplied by a.c. mains supply     | Normal                        | --         | --                     | --                 | --                            | ES3 (declared) |
|                                                                                               |                                                    | Abnormal                      | --         | --                     | --                 | --                            |                |
|                                                                                               |                                                    | Single fault – SC/OC          | --         | --                     | --                 | --                            |                |
| 264Vac                                                                                        | Plastic enclosure to earth                         | Normal                        | --         | 0.138mA <sub>p</sub> k | --                 | --                            | ES1            |
|                                                                                               |                                                    | Abnormal (OL)                 | --         | 0.138mA <sub>p</sub> k | --                 | --                            |                |
|                                                                                               |                                                    | Single fault – EC1 (SC)       | --         | 0.138mA <sub>p</sub> k | --                 | --                            |                |
|                                                                                               |                                                    | Single fault –U2 pin 2-5 (SC) | --         | 0.138mA <sub>p</sub> k | --                 | --                            |                |
|                                                                                               |                                                    | Single fault –R4 (SC)         | --         | 0.138mA <sub>p</sub> k | --                 | --                            |                |
| Supplementary information:                                                                    |                                                    |                               |            |                        |                    |                               |                |
| 1) Type: Steady state (SS), Capacitance (CP), Single pulse (SP), Repetitive pulses (RP), etc. |                                                    |                               |            |                        |                    |                               |                |
| 2) Additional Info: Frequency, Pulse duration, Pulse off time, Capacitance value, etc.        |                                                    |                               |            |                        |                    |                               |                |

| 5.4.1.8                          | TABLE: Working voltage measurement |                 |                  |                | P         |
|----------------------------------|------------------------------------|-----------------|------------------|----------------|-----------|
| Location                         |                                    | RMS voltage (V) | Peak voltage (V) | Frequency (Hz) | Comments  |
| T1 Pin 1-A                       |                                    | 235             | 368              | 12.9K          | --        |
| T1 Pin 2-A                       |                                    | 230             | 359              | 12.9K          | --        |
| T1 Pin 4-A                       |                                    | 231             | <b>548</b>       | 12.9K          | Max. Peak |
| T1 Pin 5-A                       |                                    | 229             | 410              | 12.9K          | --        |
| T1 Pin 1-B                       |                                    | 232             | 360              | 12.9K          | --        |
| T1 Pin 2-B                       |                                    | 240             | 415              | 12.9K          | --        |
| T1 Pin 4-B                       |                                    | <b>258</b>      | 483              | 12.9K          | Max. RMS  |
| T1 Pin 5-B                       |                                    | 234             | 359              | 12.9K          | --        |
| CY1 Primary pin to secondary pin |                                    | 225             | 357              | 50             | --        |
| Supplementary information: N/A   |                                    |                 |                  |                |           |

| IEC 62368-1                    |                                                             |                 |                  |
|--------------------------------|-------------------------------------------------------------|-----------------|------------------|
| Clause                         | Requirement + Test                                          | Result - Remark | Verdict          |
| <b>5.4.1.10.2</b>              | <b>TABLE: Vicat softening temperature of thermoplastics</b> |                 | N/A              |
| Method .....                   |                                                             | ISO 306 / B50   | —                |
| Object/ Part No./Material      | Manufacturer/trademark                                      | Thickness (mm)  | T softening (°C) |
| --                             | --                                                          | --              | --               |
| Supplementary information: N/A |                                                             |                 |                  |

| <b>5.4.1.10.3</b>                       | <b>TABLE: Ball pressure test of thermoplastics</b> |                |                       | P                        |
|-----------------------------------------|----------------------------------------------------|----------------|-----------------------|--------------------------|
| Allowed impression diameter (mm)..... : |                                                    |                | ≤ 2 mm                | —                        |
| Object/Part No./Material                | Manufacturer/trademark                             | Thickness (mm) | Test temperature (°C) | Impression diameter (mm) |
| Top enclosure                           | CHI MEI CORPORATION                                | 1.3            | 125                   | 0.71                     |
| Supplementary information: N/A          |                                                    |                |                       |                          |

| <b>5.4.2, 5.4.3</b>                                              | <b>TABLE: Minimum Clearances/Creepage distance</b> |                      |                         |                  |         |                        |                  | N/A     |
|------------------------------------------------------------------|----------------------------------------------------|----------------------|-------------------------|------------------|---------|------------------------|------------------|---------|
| Clearance (cl) and creepage distance (cr) at/of/between:         | U <sub>p</sub> (V)                                 | U <sub>rms</sub> (V) | Freq <sup>1)</sup> (Hz) | Required cl (mm) | cl (mm) | E.S. <sup>2)</sup> (V) | Required cr (mm) | cr (mm) |
| Basic / supplementary:                                           |                                                    |                      |                         |                  |         |                        |                  |         |
| Primary trace of different polarity before F1 (FI)               | <420                                               | <250                 | 50                      | 1.5              | 3.0     | --                     | 2.5              | 3.0     |
| Primary trace under F1 (FI)                                      | <420                                               | <250                 | 50                      | 1.5              | 2.9     | --                     | 2.5              | 2.9     |
| Reinforced:                                                      |                                                    |                      |                         |                  |         |                        |                  |         |
| Primary trace to secondary trace under CY1 (RI)                  | <420                                               | <250                 | 50                      | 3.0              | 6.2     | --                     | 5.0              | 6.6     |
| Primary trace to secondary trace under T1 (RI)                   | 548                                                | 258                  | 12.9K                   | 3.0              | 6.7     | --                     | 5.2              | 6.7     |
| Primary winding of T1 to secondary component (USB terminal) (RI) | 548                                                | 258                  | 12.9K                   | 3.0              | 6.8     | --                     | 5.2              | 6.8     |

| IEC 62368-1                                                                                                                                                                                                                                                                                                                                                                                                                                         |                    |     |       |     |                 |    |     |         |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------|-----|-------|-----|-----------------|----|-----|---------|
| Clause                                                                                                                                                                                                                                                                                                                                                                                                                                              | Requirement + Test |     |       |     | Result - Remark |    |     | Verdict |
| Primary core of T1 to secondary component (C4 body) (RI)                                                                                                                                                                                                                                                                                                                                                                                            | 548                | 258 | 12.9K | 3.0 | 6.0             | -- | 5.2 | 6.0     |
| Primary winding to secondary winding of T1 (RI)                                                                                                                                                                                                                                                                                                                                                                                                     | 548                | 258 | 12.9K | 3.0 | 6.1             | -- | 5.2 | 6.3     |
| Core to secondary winding of T1 (RI)                                                                                                                                                                                                                                                                                                                                                                                                                | 548                | 258 | 12.9K | 3.0 | 6.2             | -- | 5.2 | 6.2     |
| Primary circuit to accessible enclosure (RI)                                                                                                                                                                                                                                                                                                                                                                                                        | 548                | 258 | 12.9K | 3.0 | 4.6             | -- | 5.0 | 5.3     |
| Supplementary information:<br>1) Only for frequency above 30 kHz<br>2) Complete Electric Strength voltage (E.S. (V) when 5.4.2.4 applied)<br>3) For clearance and creepage did not describe above are far larger than limit above.<br>The secondary of T1 used triple insulated wire, core as primary of T1.<br>4) FI: Functional insulation; BI: Basic insulation; SI: Supplementary insulation; DI: Double insulation; RI: Reinforced insulation. |                    |     |       |     |                 |    |     |         |

| 5.4.4.2                                 | TABLE: Minimum distance through insulation |            |                   |                   | P |
|-----------------------------------------|--------------------------------------------|------------|-------------------|-------------------|---|
| Distance through insulation (DTI) at/of | Peak voltage (V)                           | Insulation | Required DTI (mm) | Measured DTI (mm) |   |
| Bobbin of T1                            | 3000Vac                                    | Reinforce  | 0.4               | 0.7               |   |
| Plastic enclosure (All sources)         | 3000Vac                                    | Reinforce  | 0.4               | 1.5               |   |
| Insulation tape (All sources)           | 3000Vac                                    | Reinforce  | 2 layers          | 2 layers          |   |
| Supplementary information: N/A          |                                            |            |                   |                   |   |

|                                |                                                |       |                 |       |                    |            |                |
|--------------------------------|------------------------------------------------|-------|-----------------|-------|--------------------|------------|----------------|
| 5.4.4.9                        | TABLE: Solid insulation at frequencies >30 kHz |       |                 |       |                    |            | N/A            |
| Insulation material            |                                                | $E_P$ | Frequency (kHz) | $K_R$ | Thickness $d$ (mm) | Insulation | $V_{PW}$ (Vpk) |
| --                             |                                                | --    | --              | --    | --                 | --         | --             |
| Supplementary information: N/A |                                                |       |                 |       |                    |            |                |

|              |                                       |  |  |  |  |  |  |   |
|--------------|---------------------------------------|--|--|--|--|--|--|---|
| <b>5.4.9</b> | <b>TABLE: Electric strength tests</b> |  |  |  |  |  |  | P |
|--------------|---------------------------------------|--|--|--|--|--|--|---|

| IEC 62368-1                                                      |                                                    |                  |                       |
|------------------------------------------------------------------|----------------------------------------------------|------------------|-----------------------|
| Clause                                                           | Requirement + Test                                 | Result - Remark  | Verdict               |
| Test voltage applied between:                                    | Voltage shape<br>(Surge, Impulse, AC,<br>DC, etc.) | Test voltage (V) | Breakdown<br>Yes / No |
| Basic/supplementary                                              |                                                    |                  |                       |
| L to N (with F1 opened)                                          | DC                                                 | 2500V            | No                    |
| Reinforced:                                                      |                                                    |                  |                       |
| L/N to output terminal                                           | DC                                                 | 4000V            | No                    |
| L/N to plastic enclosure wrapped with metal foil                 | DC                                                 | 4000V            | No                    |
| Primary to secondary of transformer T1                           | DC                                                 | 4000V            | No                    |
| Secondary to core of transformer T1                              | DC                                                 | 4000V            | No                    |
| Insulation tape used in and around transformer T1 (single layer) | DC                                                 | 4000V            | No                    |
| From Enclosure inside to Enclosure outside                       | DC                                                 | 4000V            | No                    |
| Supplementary information: N/A                                   |                                                    |                  |                       |

|                                                                                                                                                                                                                                                                       |                                       |                                             |                 |                        |          |     |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------|---------------------------------------------|-----------------|------------------------|----------|-----|
| 5.5.2.2                                                                                                                                                                                                                                                               | TABLE: Stored discharge on capacitors |                                             |                 |                        |          | N/A |
| Location                                                                                                                                                                                                                                                              | Supply voltage (V)                    | Operating and fault condition <sup>1)</sup> | Switch position | Measured voltage (Vpk) | ES Class |     |
| --                                                                                                                                                                                                                                                                    | --                                    | --                                          | --              | --                     | --       |     |
| Supplementary information:<br>X-capacitors installed for testing:<br><input type="checkbox"/> bleeding resistor rating:<br><input type="checkbox"/> ICX:<br>1) Normal operating condition (e.g., normal operation, or open fuse), SC= short circuit, OC= open circuit |                                       |                                             |                 |                        |          |     |

|                                      |                                                             |                |                  |                |   |
|--------------------------------------|-------------------------------------------------------------|----------------|------------------|----------------|---|
| 5.6.6                                | TABLE: Resistance of protective conductors and terminations |                |                  |                | P |
| Location                             | Test current (A)                                            | Duration (min) | Voltage drop (V) | Resistance (Ω) |   |
| Earth pin to the farthest metal part | 32                                                          | 2              | --               | 0.008          |   |
| Supplementary information: N/A       |                                                             |                |                  |                |   |

|              |                                          |                    |                                                |                                                |            |          |
|--------------|------------------------------------------|--------------------|------------------------------------------------|------------------------------------------------|------------|----------|
| <b>5.7.4</b> | <b>TABLE: Unearthed accessible parts</b> |                    |                                                |                                                |            | P        |
| Location     | Operating and fault conditions           | Supply Voltage (V) | Parameters                                     |                                                |            | ES class |
|              |                                          |                    | Voltage (V <sub>rms</sub> or V <sub>pk</sub> ) | Current (A <sub>rms</sub> or A <sub>pk</sub> ) | Freq. (Hz) |          |

| IEC 62368-1                                                                     |                                              |     |    |                       |    |         |
|---------------------------------------------------------------------------------|----------------------------------------------|-----|----|-----------------------|----|---------|
| Clause                                                                          | Requirement + Test                           |     |    | Result - Remark       |    | Verdict |
| Plastic enclosure to earth                                                      | Normal                                       | 264 | -- | 0.138mA <sub>pk</sub> | -- | ES1     |
|                                                                                 | Abnormal – see table B.3, B.4 for detail     | 264 | -- | 0.138mA <sub>pk</sub> | -- | ES1     |
|                                                                                 | Single fault – see table B.3, B.4 for detail | 264 | -- | 0.138mA <sub>pk</sub> | -- | ES1     |
| Supplementary information:<br>Abbreviation: SC= short circuit; OC= open circuit |                                              |     |    |                       |    |         |

|                                   |                                           |                                                                                     |                    |         |
|-----------------------------------|-------------------------------------------|-------------------------------------------------------------------------------------|--------------------|---------|
| 5.7.5                             | TABLE: Earthed accessible conductive part |                                                                                     |                    | N/A     |
| Supply voltage (V) ..... :        |                                           | --                                                                                  |                    | —       |
| Phase(s) ..... :                  |                                           | [ ] Single Phase; [ ] Three Phase: [ ] Delta [ ] Wye                                |                    | —       |
| Power Distribution System ..... : |                                           | <input type="checkbox"/> TN <input type="checkbox"/> TT <input type="checkbox"/> IT |                    | —       |
| Location                          |                                           | Fault Condition No in IEC 60990 clause 6.2.2                                        | Touch current (mA) | Comment |
| --                                |                                           | --                                                                                  | --                 | --      |
| Supplementary Information: N/A    |                                           |                                                                                     |                    |         |

|                                                                                 |                                                                |                               |          |                          |                   |          |
|---------------------------------------------------------------------------------|----------------------------------------------------------------|-------------------------------|----------|--------------------------|-------------------|----------|
| <b>5.8</b>                                                                      | <b>TABLE: Backfeed safeguard in battery backed up supplies</b> |                               |          |                          |                   | N/A      |
| Location                                                                        | Supply voltage (V)                                             | Operating and fault condition | Time (s) | Open-circuit voltage (V) | Touch current (A) | ES Class |
| --                                                                              | --                                                             | --                            | --       | --                       | --                | --       |
| Supplementary information:<br>Abbreviation: SC= short circuit, OC= open circuit |                                                                |                               |          |                          |                   |          |

|                                                                                                                                                          |                                                    |             |             |                              |          |          |
|----------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------|-------------|-------------|------------------------------|----------|----------|
| <b>6.2.2</b>                                                                                                                                             | <b>TABLE: Power source circuit classifications</b> |             |             |                              |          | N/A      |
| Location                                                                                                                                                 | Operating and fault condition                      | Voltage (V) | Current (A) | Max. Power <sup>1)</sup> (W) | Time (S) | PS class |
| --                                                                                                                                                       | --                                                 | --          | --          | --                           | --       | --       |
| Supplementary information:<br>Abbreviation: SC= short circuit; OC= open circuit<br>1) Measured after 3 s for PS1 and measured after 5 s for PS2 and PS3. |                                                    |             |             |                              |          |          |

|                |                                           |  |  |  |  |   |
|----------------|-------------------------------------------|--|--|--|--|---|
| <b>6.2.3.1</b> | <b>TABLE: Determination of Arcing PIS</b> |  |  |  |  | P |
|----------------|-------------------------------------------|--|--|--|--|---|

| IEC 62368-1                    |                                      |                            |                  |                      |
|--------------------------------|--------------------------------------|----------------------------|------------------|----------------------|
| Clause                         | Requirement + Test                   |                            | Result - Remark  | Verdict              |
| Location                       | Open circuit voltage after 3 s (Vpk) | Measured r.m.s current (A) | Calculated value | Arcing PIS? Yes / No |
| Primary circuits               | --                                   | --                         | --               | Yes (declaration)    |
| Supplementary information: N/A |                                      |                            |                  |                      |

|                                                                                 |                                              |                     |                         |          |
|---------------------------------------------------------------------------------|----------------------------------------------|---------------------|-------------------------|----------|
| <b>6.2.3.2</b>                                                                  | <b>TABLE: Determination of resistive PIS</b> |                     |                         | <b>P</b> |
| Location                                                                        | Operating and fault condition                | Dissipate power (W) | Resistive PIS? Yes / No |          |
| All internal circuits / components                                              | --                                           | --                  | Yes (declaration)       |          |
| Supplementary information:<br>Abbreviation: SC= short circuit; OC= open circuit |                                              |                     |                         |          |

|                                |                                  |                  |                                     |                                    |            |
|--------------------------------|----------------------------------|------------------|-------------------------------------|------------------------------------|------------|
| <b>8.5.5</b>                   | <b>TABLE: High pressure lamp</b> |                  |                                     |                                    | <b>N/A</b> |
| Lamp manufacturer              | Lamp type                        | Explosion method | Longest axis of glass particle (mm) | Particle found beyond 1 m Yes / No |            |
| --                             | --                               | --               | --                                  | --                                 |            |
| Supplementary information: N/A |                                  |                  |                                     |                                    |            |

|                                              |                                                                        |              |                                  |              |                                       |              |                                       |              |
|----------------------------------------------|------------------------------------------------------------------------|--------------|----------------------------------|--------------|---------------------------------------|--------------|---------------------------------------|--------------|
| <b>9.6</b>                                   | <b>TABLE: Temperature measurements for wireless power transmitters</b> |              |                                  |              |                                       |              |                                       | <b>N/A</b>   |
| Supply voltage (V) .....                     |                                                                        | --           |                                  |              |                                       |              |                                       | —            |
| Max. transmit power of transmitter (W) ..... |                                                                        | --           |                                  |              |                                       |              |                                       | —            |
| Foreign objects                              | w/o receiver and direct contact                                        |              | with receiver and direct contact |              | with receiver and at distance of 2 mm |              | with receiver and at distance of 5 mm |              |
|                                              | Object (°C)                                                            | Ambient (°C) | Object (°C)                      | Ambient (°C) | Object (°C)                           | Ambient (°C) | Object (°C)                           | Ambient (°C) |
| --                                           | --                                                                     | --           | --                               | --           | --                                    | --           | --                                    | --           |
| Supplementary information: N/A               |                                                                        |              |                                  |              |                                       |              |                                       |              |

| IEC 62368-1                      |                                                             |            |           |            |           |                 |                               |                               |
|----------------------------------|-------------------------------------------------------------|------------|-----------|------------|-----------|-----------------|-------------------------------|-------------------------------|
| Clause                           | Requirement + Test                                          |            |           |            |           | Result - Remark |                               | Verdict                       |
| 5.4.1.4,<br>9.3, B.1.5,<br>B.2.6 | TABLE: Temperature measurements                             |            |           |            |           |                 |                               | P                             |
|                                  | Supply voltage (V) .....                                    |            |           | 90V/60Hz   |           | 275V/60Hz       |                               | —                             |
|                                  | Ambient temperature during test $T_{\text{amb}}$ (°C) ..... |            |           | 25.0       | 35.0      | 25.0            | 35.0                          | —                             |
|                                  | Maximum measured temperature $T$ of part/at:                |            |           | $T$ (°C)   |           |                 |                               | Allowed $T_{\text{max}}$ (°C) |
|                                  | AC inlet                                                    |            |           | 35.4       | 45.4      | 36.7            | 46.7                          | --                            |
|                                  | Input Wire                                                  |            |           | 39.6       | 49.6      | 41.5            | 51.5                          | 105                           |
|                                  | Output Wire                                                 |            |           | 39.3       | 49.3      | 43.6            | 53.6                          | 105                           |
|                                  | CY1 Body                                                    |            |           | 59.7       | 69.7      | 54.1            | 64.1                          | 105                           |
|                                  | U2 Body                                                     |            |           | 59.4       | 69.4      | 50.9            | 60.9                          | 110                           |
|                                  | T1 Coil                                                     |            |           | 56.8       | 66.8      | 65.1            | 75.1                          | 110                           |
|                                  | T1 Core                                                     |            |           | 53.7       | 63.7      | 61.6            | 71.6                          | --                            |
|                                  | Power switch                                                |            |           | 31.5       | 41.5      | 32.3            | 42.3                          | 60                            |
|                                  | PCB near UB15                                               |            |           | 43.7       | 53.7      | 52.5            | 62.5                          | 130                           |
|                                  | C269 Body                                                   |            |           | 41.9       | 51.9      | 46.2            | 56.2                          | 105                           |
|                                  | PCB near IQ85                                               |            |           | 41.1       | 51.1      | 40.1            | 50.1                          | 130                           |
|                                  | PCB near IC11                                               |            |           | 39.6       | 49.6      | 42.1            | 52.1                          | 130                           |
|                                  | Internal housing near T1                                    |            |           | 42.5       | 52.5      | 47.5            | 57.5                          | --                            |
|                                  | External housing near T1                                    |            |           | 41.2       | 51.2      | 47              | 57                            | 60                            |
|                                  | LCD Panel                                                   |            |           | 29.6       | --        | 28.5            | --                            | 60                            |
| Enclosure outside top near T1    |                                                             |            | 35.9      | --         | 33.9      | --              | 60                            |                               |
| Temperature $T$ of winding:      |                                                             | $t_1$ (°C) | $R_1$ (Ω) | $t_2$ (°C) | $R_2$ (Ω) | $T$ (°C)        | Allowed $T_{\text{max}}$ (°C) | Insulation class              |
| --                               |                                                             | --         | --        | --         | --        | --              | --                            | --                            |
| Supplementary information: --    |                                                             |            |           |            |           |                 |                               |                               |

| <b>B.2.5</b> | <b>TABLE: Input test</b> |       |             |       |             |         |            | <b>P</b>           |
|--------------|--------------------------|-------|-------------|-------|-------------|---------|------------|--------------------|
| U (V)        | Hz                       | I (A) | I rated (A) | P (W) | P rated (W) | Fuse No | I fuse (A) | Condition/status   |
| 90           | 50                       | 1.030 | --          | 79.2  | --          | F1      | 1.030      | MAX normal working |
| 90           | 60                       | 1.059 | --          | 79.5  | --          | F1      | 1.059      |                    |
| 100          | 50                       | 0.959 | --          | 78.8  | 80          | F1      | 0.959      |                    |

| IEC 62368-1                                                                                                        |                    |       |    |      |    |                 |         |
|--------------------------------------------------------------------------------------------------------------------|--------------------|-------|----|------|----|-----------------|---------|
| Clause                                                                                                             | Requirement + Test |       |    |      |    | Result - Remark | Verdict |
| 100                                                                                                                | 60                 | 0.964 | -- | 78.9 | 80 | F1              | 0.964   |
| 250                                                                                                                | 50                 | 0.377 | -- | 78.1 | 80 | F1              | 0.377   |
| 250                                                                                                                | 60                 | 0.381 | -- | 78.3 | 80 | F1              | 0.381   |
| 275                                                                                                                | 50                 | 0.349 | -- | 78.2 | -- | F1              | 0.349   |
| 275                                                                                                                | 60                 | 0.354 | -- | 78.3 | -- | F1              | 0.354   |
| Supplementary information:<br>Equipment may be have rated current or rated power or both. Both should be measured. |                    |       |    |      |    |                 |         |

| <b>B.3, B.4</b>                                                   | <b>TABLE: Abnormal operating and fault condition tests</b> |                    |           |          |                       | <b>N/A</b>                                                 |
|-------------------------------------------------------------------|------------------------------------------------------------|--------------------|-----------|----------|-----------------------|------------------------------------------------------------|
| Ambient temperature $T_{amb}$ (°C)..... :                         |                                                            |                    |           |          | 25°C if not specified | —                                                          |
| Power source for EUT: Manufacturer, model/type, outputrating .. : |                                                            |                    |           |          | --                    | —                                                          |
| Component No.                                                     | Condition                                                  | Supply voltage (V) | Test time | Fuse no. | Fuse current (A)      | Observation                                                |
| BD1                                                               | SC                                                         | 264                | 1s        | F1       | 0                     | Unit shut down, F1 fuse open, no hazardous.                |
| C1                                                                | SC                                                         | 264                | 1s        | F1       | 0                     | Unit shut down, F1 fuse open, no hazardous.                |
| U2 pin 2-5                                                        | SC                                                         | 264                | 1s        | F1       | 0                     | Unit shut down, F1 fuse open, no damaged, no hazardous.    |
| D4                                                                | SC                                                         | 264                | 1s        | F1       | 0                     | Unit shut down, F1 fuse open, no damaged, no hazardous.    |
| R4                                                                | SC                                                         | 264                | 1s        | F1       | 0                     | Unit shut down, F1 fuse open, R4 damaged, no hazardous.    |
| T1 pin 1-2                                                        | SC                                                         | 264                | 30mins    | F1       | 0.02                  | Unit shut down, can be recovery, no damaged, no hazardous. |
| T1 pin 4-5                                                        | SC                                                         | 264                | 30mins    | F1       | 0.02                  | Unit shut down, can be recovery, no damaged, no hazardous. |
| T1 pin A-B                                                        | SC                                                         | 264                | 30mins    | F1       | 0.02                  | Unit shut down, can be recovery, no damaged, no hazardous. |
| C4                                                                | SC                                                         | 264                | 30mins    | F1       | 0.02                  | Unit shut down, can be recovery, no damaged, no hazardous. |
| U1 pin 11 to 17                                                   | SC                                                         | 264                | 30mins    | F1       | 0.02                  | Unit shut down, can be recovery, no damaged, no            |

| IEC 62368-1                    |                    |     |          |                 |       |                                                                                                                                                                                                      |
|--------------------------------|--------------------|-----|----------|-----------------|-------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Clause                         | Requirement + Test |     |          | Result - Remark |       | Verdict                                                                                                                                                                                              |
|                                |                    |     |          |                 |       | hazardous.                                                                                                                                                                                           |
| U1 pin 12 to 17                | SC                 | 264 | 30mins   | F1              | 0.02  | Unit shut down, can be recovery, no damaged, no hazardous.                                                                                                                                           |
| USB output                     | OL                 | 264 | 4h15mins | F1              | 0.365 | The unit operated under the fault condition and ran for thermal equilibrium. No hazard, No damage. Max. load current 2.5 A. Unit protect when USB output overloaded with 2.55A. NO damage, no hazard |
| USB output                     | SC                 | 264 | 30mins   | F1              | 0.353 | Unit normal working, no damaged, no hazardous.                                                                                                                                                       |
| Supplementary information: N/A |                    |     |          |                 |       |                                                                                                                                                                                                      |

|                                                                                                                                                                                |                                                                        |                                    |                        |             |                         |                              |             |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------|------------------------------------|------------------------|-------------|-------------------------|------------------------------|-------------|
| M.3                                                                                                                                                                            | TABLE: Protection circuits for batteries provided within the equipment |                                    |                        |             |                         |                              | N/A         |
| Is it possible to install the battery in a reverse polarity position? ..... :                                                                                                  |                                                                        |                                    |                        | No          |                         | —                            |             |
| Equipment Specification                                                                                                                                                        | Charging                                                               |                                    |                        |             |                         |                              |             |
|                                                                                                                                                                                | Voltage (V)                                                            |                                    |                        | Current (A) |                         |                              |             |
|                                                                                                                                                                                | --                                                                     |                                    |                        | --          |                         |                              |             |
| Manufacturer/type                                                                                                                                                              | Battery specification                                                  |                                    |                        |             |                         |                              |             |
|                                                                                                                                                                                | Non-rechargeable batteries                                             |                                    | Rechargeable batteries |             |                         |                              |             |
|                                                                                                                                                                                | Discharging current (A)                                                | Unintentional charging current (A) | Charging               |             | Discharging current (A) | Reverse charging current (A) |             |
|                                                                                                                                                                                |                                                                        |                                    | Voltage (V)            | Current (A) |                         |                              |             |
|                                                                                                                                                                                | --                                                                     | --                                 | --                     | --          | --                      | --                           |             |
| Note: The tests of M.3.2 are applicable only when above appropriate data is not available.                                                                                     |                                                                        |                                    |                        |             |                         |                              |             |
| Specified battery temperature (°C)..... :                                                                                                                                      |                                                                        |                                    |                        | 0-45        |                         | —                            |             |
| Component No.                                                                                                                                                                  | Fault condition                                                        | Charge/ discharge mode             | Test time              | Temp. (°C)  | Current (A)             | Voltage (V)                  | Observation |
| --                                                                                                                                                                             | --                                                                     | --                                 | --                     | --          | --                      | --                           | --          |
| Supplementary information:                                                                                                                                                     |                                                                        |                                    |                        |             |                         |                              |             |
| Abbreviation: SC= short circuit; OC= open circuit NL= no chemical leakage; NS= no spillage of liquid; NE= no explosion; NF= no emission of flame or expulsion of molten metal. |                                                                        |                                    |                        |             |                         |                              |             |

|              |                                                                                        |     |
|--------------|----------------------------------------------------------------------------------------|-----|
| <b>M.4.2</b> | <b>TABLE: Charging safeguards for equipment containing a secondary lithium battery</b> | N/A |
|--------------|----------------------------------------------------------------------------------------|-----|

| IEC 62368-1                                                                                                                                                                                                                      |                               |                      |                      |                 |             |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------|----------------------|----------------------|-----------------|-------------|
| Clause                                                                                                                                                                                                                           | Requirement + Test            |                      |                      | Result - Remark | Verdict     |
|                                                                                                                                                                                                                                  |                               |                      |                      |                 |             |
| Maximum specified charging voltage (V) ..... :                                                                                                                                                                                   |                               |                      |                      | --              | —           |
| Maximum specified charging current (A) ..... :                                                                                                                                                                                   |                               |                      |                      | --              | —           |
| Highest specified charging temperature (°C) ..... :                                                                                                                                                                              |                               |                      |                      | --              | —           |
| Lowest specified charging temperature (°C) ..... :                                                                                                                                                                               |                               |                      |                      | --              | —           |
| Battery manufacturer/type                                                                                                                                                                                                        | Operating and fault condition | Measurement          |                      |                 | Observation |
|                                                                                                                                                                                                                                  |                               | Charging voltage (V) | Charging current (A) | Temp. (°C)      |             |
| --                                                                                                                                                                                                                               | --                            | --                   | --                   | --              | --          |
| Supplementary information:                                                                                                                                                                                                       |                               |                      |                      |                 |             |
| Abbreviation: SC= short circuit; OC= open circuit; MSCV= maximum specified charging voltage; MSCC= maximum specified charging current; HSCT= highest specified charging temperature; LSCT= lowest specified charging temperature |                               |                      |                      |                 |             |

| Q.1                           | TABLE: Circuits intended for interconnection with building wiring (LPS) |                     |          |                     |       |        | P     |
|-------------------------------|-------------------------------------------------------------------------|---------------------|----------|---------------------|-------|--------|-------|
| Output Circuit                | Condition                                                               | U <sub>oc</sub> (V) | Time (s) | I <sub>sc</sub> (A) |       | S (VA) |       |
|                               |                                                                         |                     |          | Meas.               | Limit | Meas.  | Limit |
| USB output                    | Normal                                                                  | 5.02                | 3        | 2.5                 | 8     | 11.47  | 100   |
|                               | R451 SC                                                                 | 0                   | 3        | 0                   | 8     | 0      | 100   |
| HDMI                          | Normal                                                                  | 5.0                 | 3        | 0                   | 8     | 0      | 100   |
|                               | R724                                                                    | 0                   | 3        | 0                   | 8     | 0      | 100   |
| Supplementary Information: -- |                                                                         |                     |          |                     |       |        |       |

| T.2, T.3, T.4, T.5             | TABLE: Steady force test |                |       |           |                   |                      | P |
|--------------------------------|--------------------------|----------------|-------|-----------|-------------------|----------------------|---|
| Part/Location                  | Material                 | Thickness (mm) | Probe | Force (N) | Test Duration (s) | Observation          |   |
| Internal component / wire      | --                       | --             | --    | 100       | 5                 | No damage            |   |
| Top enclosure                  | Metal                    | Min. 1.0       | --    | 250       | 5                 | No damage, No hazard |   |
| Side enclosure                 | Metal                    | Min. 1.0       | --    | 250       | 5                 | No damage, No hazard |   |
| Front                          | Glass                    | --             | --    | 250       | 5                 | No damage, No hazard |   |
| Supplementary information: N/A |                          |                |       |           |                   |                      |   |

| IEC 62368-1 |                    |                 |         |
|-------------|--------------------|-----------------|---------|
| Clause      | Requirement + Test | Result - Remark | Verdict |

| <b>T.6, T.9</b>                | <b>TABLE: Impact test</b> |                |             |             | P |
|--------------------------------|---------------------------|----------------|-------------|-------------|---|
| Location/part                  | Material                  | Thickness (mm) | Height (mm) | Observation |   |
| Top enclosure                  | Metal                     | Min. 1.0       | 1300        | No hazard   |   |
| Side enclosure                 | Metal                     | Min. 1.0       | 1300        | No hazard   |   |
| Front                          | Glass                     | --             | 408         | No hazard   |   |
| Supplementary information: N/A |                           |                |             |             |   |

| <b>T.7</b>                     | <b>TABLE: Drop test</b> |                |             |             | N/A |
|--------------------------------|-------------------------|----------------|-------------|-------------|-----|
| Location/part                  | Material                | Thickness (mm) | Height (mm) | Observation |     |
| --                             | --                      | --             | --          | --          |     |
| Supplementary information: N/A |                         |                |             |             |     |

| <b>T.8</b>                     | <b>TABLE: Stress relief test</b> |                |                       |              |                                                         | P |
|--------------------------------|----------------------------------|----------------|-----------------------|--------------|---------------------------------------------------------|---|
| Location/Part                  | Material                         | Thickness (mm) | Oven Temperature (°C) | Duration (h) | Observation                                             |   |
| Internal enclosure             | Plastic                          | Min. 1.5       | 70                    | 7            | No damaged, the hazardous live parts cannot be touched. |   |
| Supplementary information: N/A |                                  |                |                       |              |                                                         |   |

| <b>X</b>                       | <b>TABLE: Alternative method for determining minimum clearances distances</b> |                  |                  |  | N/A |
|--------------------------------|-------------------------------------------------------------------------------|------------------|------------------|--|-----|
| Clearance distanced between:   | Peak of working voltage (V)                                                   | Required cl (mm) | Measured cl (mm) |  |     |
| --                             | --                                                                            | --               | --               |  |     |
| Supplementary information: N/A |                                                                               |                  |                  |  |     |

| IEC 62368-1 |                    |                 |         |
|-------------|--------------------|-----------------|---------|
| Clause      | Requirement + Test | Result - Remark | Verdict |

| 4.1.2                             | TABLE: Critical components information   |                 |                                         |                                |                                                             | P |
|-----------------------------------|------------------------------------------|-----------------|-----------------------------------------|--------------------------------|-------------------------------------------------------------|---|
| Object / part No.                 | Manufacturer / trademark                 | Type / model    | Technical data                          | Standard                       | Mark(s) of conformity <sup>1)</sup>                         |   |
| PCB                               | Interchangeable                          | Interchangeable | V-0, 130 °C                             | UL 94                          | UL                                                          |   |
| Power cord                        | Ningbo Liansheng Wire&Cable Co., LTd.    | H03VV-F         | 3 x 0.75 mm <sup>2</sup>                | IEC 60227-5<br>EN 50525-2-11   | VDE                                                         |   |
| Appliance connector               | Ningbo Liansheng Wire&Cable Co., LTd.    | LST3            | 10 A, 250 VAC                           | IEC/EN 60320-1                 | VDE                                                         |   |
| Plastic enclosure                 | NAN YA PLASTICS (HUI ZHOU) CORP LTD      | 6310            | V-0, 105°C, min. thickness 1.5mm        | UL 94                          | UL                                                          |   |
| Plastic enclosure                 | Interchangeable                          | Interchangeable | Metal, min. 1.0 mm                      | IEC 62368-1                    | Test with appliance                                         |   |
| Fuse(F1)                          | Conquer Electronics Co., Ltd.            | UBM-A           | F8AH, 250Vac                            | IEC/EN 60127-1, IEC/EN 60127-3 | VDE                                                         |   |
| Power switch                      | Yueqing Leniu Electronics Co., Ltd       | KCD1            | AC 250 V, 6 A                           | IEC 61058-1                    | CB (CQC):<br>Certif. No.: CN46511<br>Report No.: CTIHEA6348 |   |
| LCD Panel                         | LG Display Co., Ltd.                     | LD650EQE        | TFT-LCD, with LED backlight             | IEC 62368-1                    | Test with appliance                                         |   |
| Bridge Rectifiers (BD1)           | Taicang hengxin electronic co. LTD       | MB10F           | Max. 1 A, 1000 V                        | IEC 62368-1                    | Test in appliance                                           |   |
| Electrolytic capacitor (EC1, EC2) | Shenzhen Ocean Electronics Co., Ltd      | 15 uf, 400 V    | 15 uF, 400 V, 105 °C                    | IEC 62368-1                    | Test in appliance                                           |   |
| Transformer (T1)                  | Shenzhen Jiejiaashun Technology Co., LTD | EE1610 (700uH)  | Class B                                 | IEC 62368-1                    | Test in appliance                                           |   |
| -Bobbin                           | SUMITOMO BAKELITE CO LTD                 | PM-9820         | Phenolic, V-0, 150 °C, thickness 1.0 mm | UL 94<br>UL 746                | UL E41429                                                   |   |

| IEC 62368-1                                                                                                                                                                                                                       |                                                |                     |                                                                                        |                      |                   |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------|---------------------|----------------------------------------------------------------------------------------|----------------------|-------------------|
| Clause                                                                                                                                                                                                                            | Requirement + Test                             |                     | Result - Remark                                                                        |                      | Verdict           |
| -Primary magnet wire                                                                                                                                                                                                              | SHANTOU SHENGANG ELECTRICAL INDUSTRIAL CO LTD  | 2UEW-F 155°C        | 155 °C                                                                                 | UL 1446              | UL E239508        |
| -Secondary triple wire                                                                                                                                                                                                            | Rubadue Wire Co., Inc.                         | Tefzel 210 Serie(s) | 155 °C                                                                                 | IEC/EN 62368-1       | VDE 136743        |
| -Insulation tape                                                                                                                                                                                                                  | JINGJIANG FUWEI ADHESIVE PRODUCT CO LTD        | FW                  | 130 °C                                                                                 | UL 510               | UL E302608        |
| -Margin tape                                                                                                                                                                                                                      | CHANG SHU LIANG YI TAPE INDUSTRY CO LTD        | LY-XX               | 130 °C                                                                                 | UL 510               | UL E246820        |
| -Tube                                                                                                                                                                                                                             | ShenZhen Woer Heat-Shrinkable Material Co Ltd  | WF                  | 200 °C                                                                                 | UL 224               | UL E203950        |
| -Varnish                                                                                                                                                                                                                          | SUZHOU TAIHU ELECTRIC ADVANCED MATERIAL CO LTD | ET-90(a)            | 155 °C                                                                                 | UL 1446              | UL E228349        |
| Line choke (L1)                                                                                                                                                                                                                   | Interchangeable                                | Interchangeable     | 130 °C                                                                                 | IEC/EN 62368-1       | Test in appliance |
| Y-Capacitor (CY1)                                                                                                                                                                                                                 | Murata Mfg Co Ltd                              | KX                  | Each rated max. 4700 pF, min. 250 Vac., 125 °C, Class Y1.                              | IEC/EN 60384-14:2013 | VDE               |
| DC Fan                                                                                                                                                                                                                            | ACT-RX TECHNOLOGY                              | FD1260-S3012C       | 12 Vdc, 0.13 A, 15.22 CFM, inward airflow, secured to the top metal chassis by screws. | UL 507               | UL                |
| Supplementary information:<br>1) Provided evidence ensures the agreed level of compliance. See OD-2039.<br>2) Description line content is optional. Main line description needs to clearly detail the component used for testing. |                                                |                     |                                                                                        |                      |                   |

**Attachment No.1****Product Photos**Details of: Overview for model GX8000Details of: Overview for model GX8000**- End of report -**