



AA Electro Magnetic Test Laboratory Private Limited



| | |
|-----------------------------------|-------------------|
| Report No. AAEMT/S-ELEC/201119-03 | Dated: 05/01/2021 |
| ULR No. TC85972100000008F | |

| | | | |
|---|--|------------------|------------|
| Manufacturer: | Netradyne Inc. 9191 Towne Centre Drive, Suite 200, San Diego, CA 92122 | | |
| Test item: | Driveri | | |
| Identification: | Main model: D-210 Series Models: D-210A, D-211 | Serial No.: | 264000337 |
| Receipt No.: | AAEMT/S-ELEC/201119-03 | Date of receipt: | 19/11/2020 |
| Testing laboratory and its address: | AA ELECTRO MAGNETIC TEST LABORATORY PRIVATE LIMITED Plot No.174,Udyog Vihar Phase 4,Sector-18, Gurugram-122016,Haryana, India | | |
| Test specification: | IEC 62368-1:2018 | | |
| Test Result: | The test item passed / failed the test specification(s). | | |
| Other Aspects: | Driveri Main Model no. : D-210 has been tested as per IEC 62368-1:2018 complies to all the applicable parameter. The technical details of series models have been verified by Lab and found satisfactory. | | |
| This test report relates to the test sample submitted and list of documents attached. | | | |

| Tested by: | Approved by / Authorized Signatory: | Reviewed & Issued by: |
|---|--|-----------------------|
| Ratnesh Ratnesh Gupta (Test Engineer) | Dr. R Lenin Raja (Vice President-Engineering) | Arti (BRO) |
| Name/Designation | Name/Designation | Name/Designation |
| Date: 05/01/2021 | Date: 05/01/2021 | Date: 05/01/2021 |





AA Electro Magnetic Test Laboratory Private Limited



Report No. AAEMT/S-ELEC/201119-03
ULR No. TC85972100000008F

Dated: 05/01/2021

IEC 62368-1:2018

| | |
|---------------------------------------|--|
| Report Reference No. | AAEMT/S-ELEC/201119-03 |
| Date of issue | 05/01/2021 |
| Total number of pages | 57 |
| Testing Laboratory | AA ELECTRO MAGNETIC TEST LABORATORY PRIVATE LIMITED |
| Address | Plot No.174,Udyog Vihar Phase 4,Sector-18, Gurugram-122016,Haryana, India |
| Manufacturer's name | Netradyne Inc. |
| Address | 9191 Towne Centre Drive, Suite 200, San Diego, CA 92122 |
| Applicant's name & Address | Netradyne Inc. 9191 Towne Centre Drive, Suite 200, San Diego, CA 92122 |
| Test specification: | |
| Standard | IEC 62368-1:2018 |
| Non-standard test method | N/A |
| Test item description | Driver |
| Trade Mark |  |
| Model/Type reference | Main model: D-210 Series Models: D-210A, D-211 |
| Ratings | 12Vdc, 3.0A |
| Other Documents submitted | Please refer to Table- List of attachment at Page No. 04 |

| Tested by: | Approved by / Authorized Signatory: | Issued by: |
|---|---|--|
| Ratnesh Ratnesh Gupta (Test Engineer) | Dr. R Lenin Raja (Vice President-Engineering)  | Arti Arti (BRO)  |
| Name/Designation | Name/Designation | Name/Designation |
| Date: 05/01/2021 | Date: 05/01/2021 | Date: 05/01/2021 |





AA Electro Magnetic Test Laboratory Private Limited



Report No. AAEMT/S-ELEC/201119-03

Dated: 05/01/2021

ULR No. TC859721000000008F

Trademark



Product Name



Marking Label of main model



Marking Label of Series models



Rathush

Tested By:

Page 3 of 57



Issued By:

Plot No.174, Udyog Vihar Phase 4, Sector -18, Gurgaon -122016, Haryana, India
Contact:0124-4235350, 4145343, e-mail: info@aaemtlabs.com, Website: www.aaemtlabs.com



AA Electro Magnetic Test Laboratory Private Limited



Report No. AAEMT/S-ELEC/201119-03

Dated: 05/01/2021

ULR No. TC859721000000008F

Table – List of Attachments

| Attachment No. | Attachment Description | No. of pages in Attachment |
|----------------|------------------------|----------------------------|
| Attachment – 1 | Photographs | 2 (Page no56-57) |

General remarks:

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

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

Possible test case verdicts:

- test case does not apply to the test object : N/A
- test object does meet the requirement..... : P (Pass)
- test object does not meet the requirement : F (Fail)

Sub clauses Clarification : Mentioned sub clauses are covered in the main clauses in the scope of accreditation.

Testing : See below

Date of receipt of test item : 19/11/2020

Date(s) of performance of tests : 19/11/2020 to 29/12/2020

Laboratory conditions : See below

Ambient Temperature : $25 \pm 2^\circ\text{C}$

Ambient Humidity : $60 \pm 15\%$ RH

Tested By:

Rathmish

Page 4 of 57



Issued By:



AA Electro Magnetic Test Laboratory Private Limited



TC-8597

Report No. AAEMT/S-ELEC/201119-03

Dated: 05/01/2021

ULR No. TC859721000000008F

| | |
|---|--|
| Test item particulars.....: | Driveri |
| Equipment mobility | <input type="checkbox"/> movable <input type="checkbox"/> hand-held <input type="checkbox"/> transportable <input checked="" type="checkbox"/> stationary <input type="checkbox"/> for building-in <input type="checkbox"/> direct plug-in |
| Connection to the mains | <input type="checkbox"/> pluggable equipment <input type="checkbox"/> type A <input type="checkbox"/> type B <input type="checkbox"/> permanent connection <input type="checkbox"/> detachable power supply cord <input type="checkbox"/> non-detachable power supply cord <input checked="" type="checkbox"/> not directly connected to the mains |
| Operating condition | <input checked="" type="checkbox"/> continuous <input type="checkbox"/> rated operating / resting time: |
| Access location | <input checked="" type="checkbox"/> operator accessible <input type="checkbox"/> restricted access location |
| Over voltage category (OVC) | <input type="checkbox"/> OVC I <input type="checkbox"/> OVC II <input type="checkbox"/> OVC III <input type="checkbox"/> OVC IV <input checked="" type="checkbox"/> other: SELV |
| Mains supply tolerance (%) or absolute mains supply values | N/A |
| Class of equipment | <input type="checkbox"/> Class I <input type="checkbox"/> Class II <input checked="" type="checkbox"/> Class III <input type="checkbox"/> Not classified |
| Considered current rating of protective device as a part of the building installation (A) | N/A |
| Pollution degree (PD) | <input type="checkbox"/> PD 1 <input checked="" type="checkbox"/> PD 2 <input type="checkbox"/> PD 3 |
| IP protection class | IP X0 |
| Altitude during operation (m) | Up to 2000 |
| Altitude of test laboratory (m) | < 2000 |
| Mass of equipment (kg) | 0.25Kg |
| PE/PB.....: protective earth/protective bonding | Pri: primary |
| CB.....: circuit breaker | sec: secondary |
| (SW)PS: (switching) power supply | gnd: ground |
| HV: high voltage | I/O: input/output |
| PCB.....: printed circuit (wiring) board | ii: installation instruction |
| TIW: triple insulated wire | PSU: Power Supply Unit |
| B/I.....: built-in application (compliance shall be guarantee in host equipment) | |
| F/B/S/R : Functional/Basic/Supplementary/Reinforced Insulation | |

Rathish

Tested By:

Page 5 of 57





AA Electro Magnetic Test Laboratory Private Limited



Report No. AAEMT/S-ELEC/201119-03

Dated: 05/01/2021

ULR No. TC859721000000008F

General product information:

The equipment under test is Driveri Main Model: D-210, Series models: D-210A, D-211 is Class III equipment working on 12Vdc, 3.0A.

All testing is carried out using internal power supply provided by lab.

Max. specified ambient temperature (°C).....: 40°C

Similarities :Same rated input voltage, Same class of construction, Same material enclosure characteristics

Differences between the models.....: Model No. designation

Model No. tested with-in the family series: D-210

ENERGY SOURCE IDENTIFICATION AND CLASSIFICATION TABLE:

(Note 1: Identify the following six (6) energy source forms based on the origin of the energy.)

(Note 2: The identified classification e.g., ES2, TS1, should be with respect to its ability to cause pain or injury on the body or its ability to ignite a combustible material. Any energy source can be declared Class 3 as a worse case classification e.g. PS3, ES3.

Electrically-caused injury (Clause 5):

(Note: Identify type of source, list sub-assembly or circuit designation and corresponding energy source classification)

Example: +12 V dc input ES1

| Source of electrical energy | Corresponding classification (ES) |
|-----------------------------|-----------------------------------|
| Internal circuitry | ES1 |

Electrically-caused fire (Clause 6):

(Note: List sub-assembly or circuit designation and corresponding energy source classification)

Example: Battery pack (maximum 85 watts): PS1

| Source of power or PIS | Corresponding classification (PS) |
|------------------------|-----------------------------------|
| Internal circuitry | PS1 |

Page 6 of 57

Tested By:



Plot No.174, Udyog Vihar Phase 4, Sector -18, Gurgaon -122016, Haryana, India
 Contact:0124-4235350, 4145343, e-mail: info@aaemtlabs.com, Website: www.aaemtlabs.com



| | |
|-----------------------------------|-------------------|
| Report No. AAEMT/S-ELEC/201119-03 | Dated: 05/01/2021 |
| ULR No. TC859721000000008F | |

Injury caused by hazardous substances (Clause 7)

(Note: Specify hazardous chemicals, whether produces ozone or other chemical construction not addressed as part of the component evaluation.)

Example: Liquid in filled component Glycol

| Source of hazardous substances | Corresponding chemical |
|--------------------------------|------------------------|
| Complied with annex M | N/A |

Mechanically-caused injury (Clause 8)

(Note: List moving part(s), fan, special installations, etc. & corresponding MS classification based on Table 35.)

Example: Wall mount unit MS2

| Source of kinetic/mechanical energy | Corresponding classification (MS) |
|-------------------------------------|-----------------------------------|
| Sharp edges and corners | MS1 |
| Equipment mass | MS1 |

Thermal burn injury (Clause 9)

(Note: Identify the surface or support, and corresponding energy source classification based on type of part, location, operating temperature and contact time in Table 38.)

Example: Hand-held scanner – thermoplastic enclosure TS1

| Source of thermal energy | Corresponding classification (TS) |
|--------------------------|-----------------------------------|
| All accessible parts | TS1 |

Radiation (Clause 10)

(Note: List the types of radiation present in the product and the corresponding energy source classification.)

Example: DVD – Class 1 Laser Product RS1

| Type of radiation | Corresponding classification (RS) |
|-------------------|-----------------------------------|
| LED light | RS1 |

Tested By:

Ratnesh

Page 7 of 57



Issued By:

Report No. AAEML/S-ELEC/201119-03

Dated: 05/01/2021

ULR No. TC859721000000008F

IEC 62368-1:2018

| Cl. No. | Test / Requirement name | Test result/ observation | Verdict |
|----------|---|--|---------|
| 4 | GENERAL REQUIREMENTS | In compliance | P |
| 4.1.1 | Acceptance of materials, components and subassemblies | See appended table 4.1.2 | P |
| 4.1.2 | Use of components | Components which are certified to IEC and/or national standards are used correctly within their ratings. Components not covered by IEC standards are tested under the conditions present in the equipment. (See appended table 4.1.2) | P |
| 4.1.3 | Equipment design and construction | No accessible part which could cause injury | P |
| 4.1.15 | Markings and instructions.....: | (See Annex F) | P |
| 4.4.3 | Safeguard robustness | See below | P |
| 4.4.3.2 | Steady force tests.....: | In compliance (See table T.3) | P |
| 4.4.3.3 | Drop tests: | Stationary Equipment | N/A |
| 4.4.3.4 | Impact tests : | As above | N/A |
| 4.4.3.5 | Internal accessible safeguard enclosure and barrier tests.....: | No such construction | N/A |
| 4.4.3.6 | Glass Impact tests.....: | No such construction | N/A |
| 4.4.3.7 | Glass fixation test | No such construction | N/A |
| 4.4.3.8 | Thermoplastic material tests.....: | In compliance (See table T.8) | P |
| 4.4.3.9 | Air comprising a safeguard.....: | No such construction | N/A |
| 4.4.3.10 | Accessibility and safeguard effectiveness | No damage | P |
| 4.4.4 | Displacement of a safeguard by an insulating liquid | No such construction | N/A |
| 4.4.5 | Safety interlocks | No such construction | N/A |
| 4.5 | Explosion | No explosion occurs during normal/abnormal operation and single fault conditions | P |
| 4.6 | Fixing of conductors | No such construction | N/A |
| 4.6.1 | Fix conductors not to defeat a safeguard | As above | N/A |
| 4.6.2 | 10 N force test applied to | As above | N/A |
| 4.7 | Equipment for direct insertion into mains socket - outlets | No such construction | N/A |

Ratnesh

Tested By:

Page 8 of 57

Issued By:



| | |
|-----------------------------------|-------------------|
| Report No. AAEMT/S-ELEC/201119-03 | Dated: 05/01/2021 |
| ULR No. TC859721000000008F | |

IEC 62368-1:2018

| Cl. No. | Test / Requirement name | Test result/ observation | Verdict |
|----------|---|--|---------|
| 4.7.2 | Mains plug part complies with the relevant standard.....: | | N/A |
| 4.7.3 | Torque (Nm): | | N/A |
| 4.8 | Products containing coin/button cell batteries | No coin/button batteries used | N/A |
| 4.8.2 | Instructional safeguard | | N/A |
| 4.8.3 | Battery Compartment Construction Means to reduce the possibility of children removing the battery | | N/A |
| 4.8.4 | Battery Compartment Mechanical Tests: | | N/A |
| 4.8.5 | Battery Accessibility | | N/A |
| 4.9 | Likelihood of fire or shock due to entry of conductive object.....: | It's impossible entry of a conductive object from outside the equipment. | N/A |
| 5 | ELECTRICALLY-CAUSED INJURY | | P |
| 5.2.1 | Electrical energy source classifications.....: | (See appended table 5.2) | P |
| 5.2.2 | ES1, ES2 and ES3 limits | ES1 | P |
| 5.2.2.2 | Steady-state voltage and current. | See appended table 5.2) | P |
| 5.2.2.3 | Capacitance limit. | | N/A |
| 5.2.2.4 | Single pulse limits: | No single pulses | N/A |
| 5.2.2.5 | Limits for repetitive pulses. | No repetitive pulses | N/A |
| 5.2.2.6 | Ringing signals : | No ringing signals | N/A |
| 5.2.2.7 | Audio signals : | No such audio signals | N/A |
| 5.3 | Protection against electrical energy sources | ES1 | N/A |
| 5.3.1 | General Requirements for accessible parts to ordinary, instructed and skilled persons | As above | N/A |
| 5.3.2.1 | Accessibility to electrical energy sources and safeguards | No such Accessible part | N/A |
| 5.3.2.2 | Contact requirements | | N/A |
| a) | Test with test probe from Annex V.: | | N/A |
| b) | Electric strength test potential (V)..: | | N/A |
| c) | Air gap (mm) : | | N/A |
| 5.3.2.4 | Terminals for connecting stripped wire | No such constriction | N/A |

Tested By:

Ratnesh

Page 9 of 57

Issued By:



Report No. AAEMLT/S-ELEC/201119-03

Dated: 05/01/2021

ULR No. TC85972100000008F

IEC 62368-1:2018

| Cl. No. | Test / Requirement name | Test result/ observation | Verdict |
|------------|---|---|---------|
| 5.4 | Insulation materials and requirements | No such insulation used | N/A |
| 5.4.1.2 | Properties of insulating material | See above | N/A |
| 5.4.1.3 | Humidity conditioning : | Class III equipment | N/A |
| 5.4.1.4 | Maximum operating temperature for insulating materials. | | N/A |
| 5.4.1.5 | Pollution degree.....: | PD2 | P |
| 5.4.1.5.2 | Test for pollution degree 1 environment and for an insulating compound | PD2 | N/A |
| 5.4.1.5.3 | Thermal cycling | | N/A |
| 5.4.1.6 | Insulation in transformers with varying dimensions | | N/A |
| 5.4.1.7 | Insulation in circuits generating starting pulses | Class III equipment | N/A |
| 5.4.1.8 | Determination of working voltage | As above | N/A |
| 5.4.1.9 | Insulating surfaces | As above | N/A |
| 5.4.1.10 | Thermoplastic parts on which conductive metallic parts are directly mounted | No such construction | N/A |
| 5.4.1.10.2 | Vicat softening temperature.....: | Class III equipment | N/A |
| 5.4.1.10.3 | Ball pressure : | | N/A |
| 5.4.2 | Clearances | Class III equipment | N/A |
| 5.4.2.2 | Determining clearance using peak working voltage | As above | N/A |
| 5.4.2.3 | Determining clearance using required withstand voltage. | As above | N/A |
| | a) a.c. mains transient voltage.....: | As above | N/A |
| | b) d.c. mains transient voltage: | As above | N/A |
| | c) external circuit transient voltage.: | As above | N/A |
| | d) transient voltage determined by measurement ... | | N/A |
| 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.....: | EUT intended to use in altitude up to 2000m above sea level | N/A |
| 5.4.3 | Creepage distances.: | | |

Ratnesh

Page 10 of 57

Tested By:

Issued By:



Report No. AAEMT/S-ELEC/201119-03

Dated: 05/01/2021

ULR No. TC859721000000008F

IEC 62368-1:2018

| Cl. No. | Test / Requirement name | Test result/ observation | Verdict |
|-----------|--|--------------------------|---------|
| 5.4.3.1 | General | | N/A |
| 5.4.3.3 | Material Group | | N/A |
| 5.4.4 | Solid insulation | | N/A |
| 5.4.4.2 | Minimum distance through insulation | Class III equipment | N/A |
| 5.4.4.3 | Insulation compound forming solid insulation | As above | N/A |
| 5.4.4.4 | Solid insulation in semiconductor devices | As above | N/A |
| 5.4.4.5 | Cemented joints | As above | N/A |
| 5.4.4.6 | Thin sheet material | | N/A |
| 5.4.4.6.1 | General requirements | | N/A |
| 5.4.4.6.2 | Separable thin sheet material Number of layers (pcs) | | N/A |
| 5.4.4.6.3 | Non-separable thin sheet material | | N/A |
| 5.4.4.6.4 | Standard test procedure for non-separable thin N sheet material | | N/A |
| 5.4.4.6.5 | Mandrel test | | N/A |
| 5.4.4.7 | Solid insulation in wound components | | N/A |
| 5.4.4.9 | Solid insulation at frequencies >30 kHz..... | | N/A |
| 5.4.5 | Antenna terminal insulation | Class III equipment | N/A |
| 5.4.5.1 | General | | N/A |
| 5.4.5.2 | Voltage surge test | | N/A |
| | Insulation resistance ($M\Omega$).....: | | 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 | Class III equipment | N/A |
| | Relative humidity (%): | As above | N/A |
| | Temperature ($^{\circ}C$) ...: | As above | N/A |
| | Duration (h) : | As above | N/A |
| 5.4.9 | Electric strength test.....: | Class III equipment | N/A |

Ratnesh

Page 11 of 57

Tested By:

Issued By:
Jitendra

Report No. AAEMT/S-ELEC/201119-03

Dated: 05/01/2021

ULR No. TC859721000000008F

IEC 62368-1:2018

| Cl. No. | Test / Requirement name | Test result/ observation | Verdict |
|------------|--|--------------------------|---------|
| 5.4.9.1 | Test procedure for a solid insulation type test | As above | N/A |
| 5.4.9.2 | Test procedure for routine tests | As above | N/A |
| 5.4.10 | Protection against transient voltages between external circuit | No such construction | 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 |
| 5.4.11 | Insulation between external circuits and earthed circuitry: | No such construction | N/A |
| 5.4.11.1 | Exceptions to separation between external circuits and earth | | N/A |
| 5.4.11.2 | Requirements | | N/A |
| | Rated operating voltage U_{op} (V).....: | | N/A |
| | Nominal voltage U_{peak} (V).....: | | N/A |
| | Max increase due to variation U_{sp} ...: | | N/A |
| | Max increase due to ageing U_{sa}: | | N/A |
| | $U_{op} = U_{peak} + U_{sp} + U_{sa}$ | | N/A |
| 5.4.11.2 | Test method and compliance criteria | | N/A |
| 5.4.12 | Insulating liquid | No Insulating liquid | N/A |
| 5.4.12.1 | General requirement | | N/A |
| 5.4.12.2 | Electric strength of Insulating liquid | | N/A |
| 5.4.12.3 | Compatibility of and Insulating liquid | | N/A |
| 5.4.12.4 | Container for Insulating liquid | | N/A |
| 5.5 | Components as safeguards | In compliance | P |
| 5.5.1 | General | In compliance | P |
| 5.5.2 | Capacitors and RC units | No such construction | N/A |
| 5.5.2.1 | General requirement | | N/A |

Ratnesh

Page 12 of 57

Tested By:

Issued By:





Report No. AAEMT/S-ELEC/201119-03

Dated: 05/01/2021

ULR No. TC859721000000008F

IEC 62368-1:2018

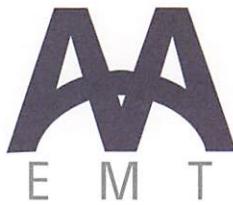
| Cl. No. | Test / Requirement name | Test result/ observation | Verdict |
|---------|---|---|---------|
| 5.5.2.2 | Safeguards against capacitor discharge after disconnection of a connector.....: | | N/A |
| 5.5.3 | Transformers | Class III equipment | N/A |
| 5.5.4 | Opt couplers | | N/A |
| 5.5.5 | Relays | No relay used | N/A |
| 5.5.6 | Resistors | | N/A |
| 5.5.7 | SPD's | Class III equipment | N/A |
| 5.5.7.1 | Use of an SPD connected to reliable earthing | | N/A |
| 5.5.7.2 | Use of an SPD between mains and protective earth | | N/A |
| 5.5.8 | Insulation between the mains and external circuit consisting of a coaxial cable.....: | No such construction | N/A |
| 5.6 | Protective conductor | Class III equipment No protective conductor used | N/A |
| 5.6.2 | Requirement for protective conductors | As above | N/A |
| 5.6.2.1 | General requirements | As above | N/A |
| 5.6.2.2 | Colour of insulation | As above | N/A |
| 5.6.3 | Requirement for protective earthing conductors | As above | N/A |
| 5.6.4 | Requirement for protective bonding conductors | As above | N/A |
| 5.6.4.1 | Protective bonding conductors | As above | N/A |
| | Protective bonding conductor size (mm ²).....: | As above | N/A |
| | Protective current rating (A) : | As above | N/A |
| 5.6.4.3 | Current limiting and overcurrent protective devices | | N/A |
| 5.6.5 | Terminals for protective conductors | | N/A |
| 5.6.5.1 | Requirement | | N/A |
| 5.6.5.2 | Conductor size (mm ²), nominal thread diameter (mm)..... | | N/A |
| 5.6.6 | Resistance of the protective system | | N/A |
| 5.6.6.1 | Requirements | | N/A |

Tested By:

Ranbir Singh

Page 13 of 57





Report No. AAEMT/S-ELEC/201119-03

Dated: 05/01/2021

ULR No. TC859721000000008F

IEC 62368-1:2018

| Cl. No. | Test / Requirement name | Test result/ observation | Verdict |
|---------|---|---|---------|
| 5.6.6.2 | Test Method Resistance (Ω). | | N/A |
| 5.6.6.3 | Compliance criteria | | N/A |
| 5.6.7 | Reliable earthing | | N/A |
| 5.6.8 | Functional earthing | | N/A |
| 5.7 | Prospective touch voltage, touch current and protective conductor current | Class III equipment | N/A |
| 5.7.1 | General | | N/A |
| 5.7.2 | Measuring devices and networks | | N/A |
| 5.7.2.1 | Measurement of touch current: | | N/A |
| 5.7.2.2 | Measurement of prospective touch voltage | | N/A |
| 5.7.3 | Equipment set-up, supply connections and earth connections | | N/A |
| | System of interconnected equipment (separate connections/single connection).....: | | N/A |
| | Multiple connections to mains (one connection at a time)/ Simultaneous connections).....: | No such construction | N/A |
| 5.7.4 | Unearthed conductive accessible parts.....: | No unearthing conductive accessible parts | N/A |
| 5.7.5 | Protective conductor current | Class III equipment | N/A |
| | Supply Voltage (V) | As above | N/A |
| | Measured current (mA) | As above | N/A |
| | Instructional Safeguard | As above | N/A |
| 5.7.6 | Requirements for when touch current exceeds ES2 limit | | N/A |
| 5.7.7 | Prospective touch voltage and touch current due to external circuits | No 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 from external circuits | | N/A |
| 5.7.8 | Summation of touch currents from external circuits | | N/A |

Rohit Singh

Tested By:

Page 14 of 57

Issued By:



Report No. AAEMT/S-ELEC/201119-03

Dated: 05/01/2021

ULR No. TC85972100000008F

IEC 62368-1:2018

| Cl. No. | Test / Requirement name | Test result/ observation | Verdict |
|-----------|--|---|---------|
| | a) Equipment with earthed external circuits Measured current (mA): | | N/A |
| | b) Equipment whose external circuits are not referenced to earth. Measured current (mA).....: | | N/A |
| 5.8 | Back-feed safeguard in battery backed up supplies. | | N/A |
| 6 | ELECTRICALLY- CAUSED FIRE | In compliance | P |
| 6.2.2 | Power source circuit classifications | PS (power source) classification determined by measuring the maximum power in Figures 34 and 35 for load and power source circuits. | P |
| 6.2.2.1 | General | See the following details. | P |
| 6.2.2.2 | Power measurement for worst-case load fault....: | (See appended table 6.2.2) | P |
| 6.2.2.3 | Power measurement for worst-case power source fault..... | (See appended table 6.2.2) | P |
| 6.2.2.4 | PS1 .. | (See appended table 6.2.2) | P |
| 6.2.2.5 | PS2.. | | N/A |
| 6.2.2.6 | PS3 .. | | N/A |
| 6.2.3 | Classification of potential ignition sources | PS1 | N/A |
| 6.2.3.1 | Arcing PIS.....: | | N/A |
| 6.2.3.2 | Resistive PIS.....: | | N/A |
| 6.3 | Safeguards against fire under normal operating and abnormal operating conditions | In compliance | P |
| 6.3.1 (a) | 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, 6.3.2, 9.0, B.2.6) | P |
| 6.3.1 (b) | Combustible materials outside fire enclosure | No such materials used. | N/A |
| 6.3.2 | Compliance criteria | In compliance | P |
| 6.4 | Safeguards against fire under single fault conditions | In compliance | P |
| 6.4.1 | General | Method by control fire spread | P |

Ratnesh

Page 15 of 57

Tested By:

Issued By:



| | |
|-----------------------------------|-------------------|
| Report No. AAEMT/S-ELEC/201119-03 | Dated: 05/01/2021 |
| ULR No. TC859721000000008F | |

IEC 62368-1:2018

| Cl. No. | Test / Requirement name | Test result/ observation | Verdict |
|-----------|---|--------------------------|---------|
| 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 | | N/A |
| 6.4.3.1 | Requirement | | N/A |
| 6.4.3.2 | Supplementary Safeguards | | N/A |
| | Special conditions if conductors on printed boards are opened or peeled | | N/A |
| 6.4.3.3 | Single Fault Conditions: | | N/A |
| | Special conditions for temperature limited by fuse | | N/A |
| 6.4.4 | Control of fire spread in PS1 circuits | In compliance | P |
| 6.4.5 | Control of fire spread in PS2 circuits | PS1 | N/A |
| 6.4.5.1 | General | | N/A |
| 6.4.5.2 | Supplementary safeguards: | | N/A |
| 6.4.5.3 | Compliance criteria: | | N/A |
| 6.4.6 | Control of fire spread in PS3 circuit | PS1 | N/A |
| 6.4.7 | Separation of combustible materials from a PIS | No such construction | N/A |
| 6.4.7.1 | General | | N/A |
| 6.4.7.2 | Separation by distance | | N/A |
| 6.4.7.3 | Separation by a fire barrier | | N/A |
| 6.4.7.4 | Compliance criteria | | N/A |
| 6.4.8 | Fire enclosures and fire barriers | In compliance | P |
| 6.4.8.1 | Fire enclosure and fire barrier material properties | In compliance | P |
| 6.4.8.2.1 | Requirements for a fire barrier | No barrier used. | N/A |
| 6.4.8.2.2 | Requirements for a fire enclosure | In compliance | P |
| 6.4.8.2.3 | Compliance criteria | In compliance | P |
| 6.4.8.3 | Constructional requirements for a fire enclosure and a fire barrier | In compliance | P |
| 6.4.8.3.1 | Fire enclosure and fire barrier openings | In compliance | P |
| 6.4.8.3.2 | Fire barrier dimensions | No barrier used. | N/A |

Rohitw

Page 16 of 57

Tested By:



Issued By:

| | |
|-----------------------------------|-------------------|
| Report No. AAEMT/S-ELEC/201119-03 | Dated: 05/01/2021 |
| ULR No. TC859721000000008F | |

IEC 62368-1:2018

| Cl. No. | Test / Requirement name | Test result/ observation | Verdict |
|-----------|---|--|---------|
| 6.4.8.3.3 | Top Openings in Fire Enclosure: dimensions (mm) : | No openings in top side | N/A |
| | Needle Flame test | | N/A |
| 6.4.8.3.4 | Bottom Openings in Fire Enclosure, condition met a), b) and/or c) dimensions (mm) : | In compliance | P |
| | Flammability tests for the bottom of a fire enclosure: | Certified plastic Enclosure used | N/A |
| 6.4.8.3.5 | Side opening and side opening properties | | N/A |
| 6.4.8.3.6 | Integrity of the fire enclosure, condition met: a), b) or c) : | | N/A |
| 6.4.8.3.7 | Compliance criteria | In compliance | P |
| 6.4.8.4 | Separation of PIS from fire enclosure and fire barrier distance (mm) or flammability rating : | No such construction | N/A |
| 6.4.9 | Flammability of insulated liquid | | N/A |
| 6.5 | Internal and external wiring | No such construction | N/A |
| 6.5.1 | Requirements | | N/A |
| 6.5.2 | Cross-sectional area (mm ²) | | N/A |
| 6.5.3 | Requirements for interconnection to building wiring : | | N/A |
| 6.6 | Safeguards against fire due to connection to additional equipment | No such construction | N/A |
| | External port limited to PS2 or complies with Clause Q.1 | | N/A |
| 7 | INJURY CAUSED BY HAZARDOUS SUBSTANCES | | N/A |
| 7.2 | Reduction of exposure to hazardous substances | No hazardous chemicals or substances within the equipment. | N/A |
| 7.3 | Ozone exposure | No ozone production within the equipment. | N/A |
| 7.4 | Use of personal safeguards (PPE) | No such consideration. | N/A |
| | Personal safeguards and instructions.....: | See above. | N/A |
| 7.5 | Use of instructional safeguards and instructions | No chemical-caused injuries, the instruction safeguard was not required. | N/A |
| | Instructional safeguard (ISO 7010) : | | N/A |
| 7.6 | Batteries: | No Batteries used in equipment | N/A |

Ratnesh

Page 17 of 57

Tested By:

gupta



| | |
|-----------------------------------|-------------------|
| Report No. AAEMT/S-ELEC/201119-03 | Dated: 05/01/2021 |
| ULR No. TC859721000000008F | |

| | | | |
|-------------|---|--|-----|
| 8 | MECHANICALLY-CAUSED INJURY | In compliance | P |
| 8.1 | General | See the following details. | P |
| 8.2 | Mechanical energy source classifications | See below | P |
| 8.2.1 | General classification | In compliance Equipment mass <7 kg, classified as MS1 and Sharp edges and corners classified as MS1 | P |
| 8.2.2 | MS1 | All parts considered as MS1 | P |
| 8.2.3 | MS2 | As above | N/A |
| 8.2.4 | MS3 | As above | N/A |
| 8.3 | Safeguards against mechanical energy sources | In compliance | P |
| 8.4 | Safeguards against parts with sharp edges and corners | Accessible edges and corners of the equipment are rounded and are classified as MS1 | P |
| 8.4.1 | Requirements: | In compliance | P |
| 8.4.2 | Compliance criteria: | In compliance | P |
| 8.5 | Safeguards against moving parts | In compliance | P |
| 8.5.1 | MS2 or MS3 part required to be accessible for the function of the equipment | MS1 part required | N/A |
| 8.5.2 | Instructional Safeguard.....: | No such instruction. | N/A |
| 8.5.3 | Compliance criteria: | In compliance | P |
| 8.5.4 | Special categories of equipment comprising moving parts | | N/A |
| 8.5.4.1 | Large data storage equipment | | N/A |
| 8.5.4.2 | Equipment having electromechanical device for destruction of media | | N/A |
| 8.5.4.2.1 | Safeguards and Safety Interlocks....: | | N/A |
| 8.5.4.2.2 | Access Protection Override | | N/A |
| 8.5.4.2.2.1 | General | | N/A |
| 8.5.4.2.2.2 | Visual indicator | | N/A |
| 8.5.4.2.3 | Emergency stop system | | N/A |
| 8.5.4.2.4 | Endurance requirement | | N/A |
| 8.5.4.3 | Equipment having and electromechanical device for destruction of media | No such Construction used in equipment. | N/A |

Ratnesh

Page 18 of 57

Tested By:

Issued By:



| | |
|-----------------------------------|-------------------|
| Report No. AAEMT/S-ELEC/201119-03 | Dated: 05/01/2021 |
| ULR No. TC859721000000008F | |

| | | | |
|-----------|--|------------------------|-----|
| 8.5.4.3.1 | General Requirements: | | 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 | Test method | | N/A |
| 8.5.4.3.5 | Compliance criteria: | | N/A |
| 8.5.5 | High Pressure Lamps | No such construction | N/A |
| 8.5.5.1 | General | As above | N/A |
| 8.5.5.2 | High Pressure Lamp Explosion Test.: | As above | N/A |
| 8.5.5.3 | Compliance criteria: | As above | N/A |
| 8.6 | Stability | MS1 type Class III EUT | N/A |
| 8.6.1 | Product classification | As above | N/A |
| | Instructional Safeguard.....: | As above | N/A |
| 8.6.2 | Static stability | As above | N/A |
| 8.6.2.1 | Test setup | As above | N/A |
| 8.6.2.2 | Static stability test | As above | N/A |
| | Applied Force.....: | As above | N/A |
| 8.6.2.3 | Downward Force Test | As above | N/A |
| 8.6.2.4 | Compliance criteria: | As above | N/A |
| 8.6.3 | Relocation stability test | As above | N/A |
| 8.6.3.1 | Requirements | As above | N/A |
| 8.6.3.2 | Unit configuration during 10° tilts.....: | As above | N/A |
| 8.6.4 | Glass slide test | As above | N/A |
| 8.6.5 | Horizontal force test (Applied Force).: | As above | N/A |
| | Position of feet or movable parts : | As above | N/A |
| 8.7 | Equipment mounted to wall or ceiling | No such construction | N/A |
| 8.7.1 | Mounting Means (Length of screws (mm) and mounting surface)....: | As above | N/A |
| 8.7.2 | Direction and applied force.: | As above | N/A |
| 8.7.3 | Compliance criteria: | As above | N/A |
| 8.8 | Handles strength | No such construction | N/A |
| 8.8.1 | Classification | As above | N/A |
| 8.8.2 | Applied Force: | As above | N/A |

Roshni

Page 19 of 57

Tested By:

Issued By:
Jit

| | |
|-----------------------------------|-------------------|
| Report No. AAEMT/S-ELEC/201119-03 | Dated: 05/01/2021 |
| ULR No. TC859721000000008F | |

| | | | |
|----------|--|--|-----|
| 8.9 | Wheels or casters attachment requirements | No such construction | N/A |
| 8.9.1 | Classification | As above | N/A |
| 8.9.2 | Applied force.....: | | N/A |
| 8.10 | Carts, stands and similar carriers | No such construction | N/A |
| 8.10.1 | General | As above | N/A |
| 8.10.2 | Marking and instructions | As above | N/A |
| | Instructional Safeguard | As above | N/A |
| 8.10.3 | Cart, stand or carrier loading test and compliance | As above | N/A |
| | Applied force.....: | As above | N/A |
| 8.10.4 | Cart, stand or carrier impact test | | N/A |
| 8.10.5 | Mechanical stability | | N/A |
| | Applied horizontal force (N).....: | | N/A |
| 8.10.6 | Thermoplastic temperature stability (°C): | | N/A |
| 8.11 | Mounting means for rack mounted equipment (SRME): | No such construction | N/A |
| 8.11.1 | General | As above | N/A |
| 8.11.2 | Product Classification | As above | N/A |
| 8.11.3 | Mechanical strength test: | | N/A |
| 8.11.3.1 | Downward force test | | 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 criteria: | | N/A |
| 8.12 | Telescoping or rod antennas: | No such construction | N/A |
| | Button/Ball diameter (mm) | See above. | N/A |
| 9 | THERMAL BURN INJURY | In compliance | P |
| 9.1 | General | In compliance | P |
| 9.2 | Thermal energy source classifications | All accessible surfaces are classified as TS1, see appended table (5.4.1.4, 6.3.2, 9.0, B.2.6) | P |
| 9.2.1 | TS1 | TS1 type EUT | P |
| 9.2.2 | TS2 | As above | N/A |
| 9.2.3 | TS3 | As above | N/A |

Tested By:

Ratnesh

Page 20 of 57

Issued By:



AA Electro Magnetic Test Laboratory Private Limited



TC-8597

| | |
|-----------------------------------|-------------------|
| Report No. AAEMT/S-ELEC/201119-03 | Dated: 05/01/2021 |
| ULR No. TC859721000000008F | |

| | | | |
|--------|--|--|-----|
| 9.3 | Touch temperature limits | All accessible surfaces are classified as TS1, see appended table (5.4.1.4, 6.3.2, 9.0, B.2.6) | P |
| 9.3.1 | Requirements | In compliance | P |
| 9.3.2 | Test method and compliance criteria | In compliance | P |
| 9.4 | Safeguards against thermal energy source | In compliance | P |
| 9.5 | Requirements for safeguard | In compliance | P |
| 9.5.1 | Equipment safeguard | In compliance | P |
| 9.5.2 | Instructional safeguard | | N/A |
| 9.6 | Requirements for wireless power transmitters | | 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 criteria | | N/A |
| 10 | RADIATION | In compliance | P |
| 10.1 | General | In compliance | P |
| 10.2 | Radiation energy source classification | RS1:LED Light | P |
| 10.2.1 | General classification | As above | P |
| 10.2.2 | RS1 | In compliance | P |
| 10.2.3 | RS2 | | N/A |
| 10.2.4 | RS3 | | N/A |
| 10.3 | Protection against laser radiation | | N/A |
| | Laser radiation that exists equipment: | | N/A |
| | Normal, abnormal, single-fault..... | | N/A |
| | Instructional safeguard..... | | N/A |
| | Tool..... | | N/A |
| 10.4 | Safeguards against optical radiation from lamps and lamp systems (including LED types) | In compliance | P |
| 10.4.1 | General requirements | In compliance | P |
| 10.4.2 | Requirements for enclosures | | N/A |
| 10.4.3 | Instructional safeguard..... | | N/A |
| 10.4.4 | Compliance criteria | In compliance | P |
| 10.5 | Protection against x-radiation | | N/A |

Rohitsh

Tested By:

Page 21 of 57

Issued By:





AA Electro Magnetic Test Laboratory Private Limited



| | |
|-----------------------------------|-------------------|
| Report No. AAEML/S-ELEC/201119-03 | Dated: 05/01/2021 |
| ULR No. TC85972100000008F | |

| | | |
|----------|---|-----|
| 10.5.1 | X- radiation energy source that exists equipment: | N/A |
| | Normal, abnormal, single fault conditions | N/A |
| | Equipment safeguards.....: | N/A |
| | Instructional safeguard for skilled person.....: | N/A |
| 10.5.2 | Compliance criteria | N/A |
| 10.5.3 | Test method | N/A |
| 10.6 | Safeguards against acoustic energy sources | N/A |
| 10.6.1 | General | N/A |
| 10.6.2 | Classification | N/A |
| 10.6.2.1 | RS1 limits | N/A |
| 10.6.2.2 | RS2 limits | N/A |
| 10.6.2.3 | RS3 limits | N/A |
| 10.6.3 | Requirements for dose-based system | N/A |
| 10.6.3.1 | General requirements | N/A |
| 10.6.3.2 | Dose-based warning and automatic decrease | N/A |
| 10.6.3.3 | Exposure-based warning and requirements | N/A |
| 10.6.4 | Measurement methods | N/A |
| 10.6.5 | Protection of persons | N/A |
| | Instructional safeguards.....: | N/A |
| | Equipment safeguard prevent ordinary person to RS2: | N/A |
| | Means to actively inform user of increase sound pressure.....: | N/A |
| 10.6.6 | Requirements for listening devices (headphones, earphones, etc.) | N/A |
| 10.6.6.1 | Corded passive listening devices with analog input | N/A |
| | Input voltage with 94 dB(A) L_{Aeq} acoustic pressure output.: | N/A |
| 10.6.6.2 | Corded listening devices with digital input | N/A |
| | Maximum dB(A).....: | N/A |

Tested By:

Rakesh

Page 22 of 57

Issued By:





AA Electro Magnetic Test Laboratory Private Limited



TC-8597

| | |
|-----------------------------------|-------------------|
| Report No. AAEMT/S-ELEC/201119-03 | Dated: 05/01/2021 |
| ULR No. TC85972100000008F | |

| | | | |
|----------|---------------------------|--|-----|
| 10.6.6.3 | Cordless listening device | | N/A |
| | Maximum dB(A).....: | | N/A |
| 10.6.6.4 | Measurement method | | N/A |

Roshni

Tested By:

Page 23 of 57

Issued By:



| | |
|-----------------------------------|-------------------|
| Report No. AAEMT/S-ELEC/201119-03 | Dated: 05/01/2021 |
| ULR No. TC859721000000008F | |

| B | NORMAL OPERATING CONDITION TESTS, ABNORMAL OPERATING CONDITION TESTS AND SINGLE FAULT CONDITION TESTS | P |
|---------|---|--|
| B.2 | Normal Operating Conditions | See the following details. |
| B.2.1 | General requirements.....: | See Test Item Particulars and appended test tables |
| | Audio Amplifiers and equipment with audio amplifiers.....: | No such construction |
| B.2.2 | Supply frequency.....: | DC Powered EUT |
| B.2.3 | Supply voltage and tolerances | See table B.2.5 |
| B.2.4 | Normal operating voltages: | See table B.2.5 |
| B.2.5 | Input test.....: | See table B.2.5 |
| B.2.6 | Operating temperature measurement conditions | See table B.2.6 |
| B.2.6.1 | General | P |
| B.2.6.2 | Operating temperature dependent heating/cooling | N/A |
| B.2.6.3 | Operating temperature independent heating/cooling | P |
| B.2.7 | Battery charging and discharging under normal operating conditions | No such construction |
| B.3 | Simulated abnormal operating conditions | No such construction |
| B.3.1 | General requirements..... | No such construction |
| B.3.2 | Covering of ventilation openings | No such construction |
| B.3.3 | D.C. mains polarity test | N/A |
| B.3.4 | Setting of voltage selector.....: | No setting of voltage selector within the EUT |
| B.3.5 | Maximum load at output terminals.....: | No such terminals. |
| B.3.6 | Reverse battery polarity | Impossible to reverse polarity of battery by its inherent design |
| B.3.7 | Abnormal operating conditions as specified in Clause E.3. | No such construction |
| B.3.8 | Safeguards functional during and after abnormal operating conditions | No setting of voltage selector within the EUT |
| B.4 | Simulated single fault conditions | See table B.4 |
| B.4.1 | General | In compliance |

Ratnesh

Page 24 of 57

Tested By:

[Signature]

Issued By:



| | |
|-----------------------------------|-------------------|
| Report No. AAEMT/S-ELEC/201119-03 | Dated: 05/01/2021 |
| ULR No. TC85972100000008F | |

| | | | |
|----------|---|---|-----|
| B.4.2 | Temperature controlling device open or short circuited.....: | No such controlling device | N/A |
| B.4.3 | Motor tests | No motor used | N/A |
| B.4.3.1 | Motor blocked or rotor locked increasing the internal ambient temperature | As above | N/A |
| B.4.3.2 | Compliance criteria | As above | N/A |
| B.4.4 | Functional insulation | In compliance | P |
| B.4.4.1 | Short circuit of clearances for functional insulation (See appended table B.3 &B.4) | See table B.4 | P |
| B.4.4.2 | Short circuit of creep age distances for functional | See table B.4 | 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 disconnect of passive components | See table B.4 | P |
| B.4.7 | Continuous operation of components | The EUT is continuous operating type and no such components intended for short time operation or intermittent operation | N/A |
| B.4.8 | Class 1 and Class 2 energy sources within limits during and after single fault conditions | See appended table B.4 | P |
| B.4.9 | Battery charging under single fault conditions.....: | No Battery used In Equipment | N/A |
| C | UV RADIATION | No such UV generated from the equipment. | N/A |
| C.1 | Protection of materials in equipment from UV radiation | As above | N/A |
| C.1.1 | General | As above | N/A |
| C.1.2 | Requirements | As above | N/A |
| C.1.3 | Test method and compliance criteria | As above | N/A |
| C.2 | UV light conditioning test | As above | N/A |
| C.2.1 | Test apparatus | As above | N/A |
| C.2.2 | Mounting of test samples | As above | N/A |
| C.2.3 | Carbon-arc light-exposure apparatus | As above | N/A |
| C.2.4 | Xenon-arc light exposure apparatus | As above | N/A |
| D | TEST GENERATORS | Not used | N/A |

Ratnesh

Tested By:



AA Electro Magnetic Test Laboratory Private Limited



Report No. AAEMT/S-ELEC/201119-03

Dated: 05/01/2021

ULR No. TC859721000000008F

| | | | |
|---------|---|--|-----|
| D.1 | Impulse test generators | | N/A |
| D.2 | Antenna interface test generator | | N/A |
| D.3 | Electronic pulse generator | | N/A |
| E | TEST CONDITIONS FOR EQUIPMENT CONTAINING AUDIO AMPLIFIERS | No audio amplifier | N/A |
| E.1 | Audio amplifier normal operating conditions | | N/A |
| | Audio signal voltage (V) | | N/A |
| | Rated load impedance (Ω) ..: | | N/A |
| E.2 | Audio amplifier normal operating conditions | | N/A |
| E.3 | Audio amplifier abnormal operating conditions | | N/A |
| F | EQUIPMENT MARKINGS, INSTRUCTIONS, AND INSTRUCTIONAL SAFEGUARDS | | P |
| F.1 | General requirements | In compliance | P |
| | Instructions – Language ..: | English | P |
| F.2 | Letter symbols and graphical symbols | In compliance | P |
| F.2.1 | Letter symbols according to IEC60027-1 | No such symbol used | N/A |
| F.2.2 | Graphic symbols IEC, ISO or manufacturer specific | | N/A |
| F.3 | Equipment markings | In compliance | P |
| F.3.1 | Equipment marking locations | Outside on the surface of the equipment | P |
| F.3.2 | Equipment identification markings | In compliance | P |
| F.3.2.1 | Manufacturer identification ..: |  netradyne | P |
| F.3.2.2 | Model identification: | Main model: D-210 Series Models: D-210A, D-211 | P |
| F.3.3 | Equipment rating markings | In compliance | P |
| F.3.3.1 | Equipment with direct connection to mains | Not provided with a means for direct connection to mains supply | N/A |
| F.3.3.2 | Equipment without direct connection to mains | Not provided with a means for direct connection to mains supply | N/A |
| F.3.3.3 | Nature of supply voltage | DC Supply | P |
| F.3.3.4 | Rated voltage.....: | 12V dc | P |

Ratnesh

Page 26 of 57

Tested By:

Issued By:

| | |
|-----------------------------------|-------------------|
| Report No. AAEMT/S-ELEC/201119-03 | Dated: 05/01/2021 |
| ULR No. TC85972100000008F | |

| | | | |
|-----------|---|---|-----|
| F.3.3.4 | Rated frequency.....: | Dc powered equipment | N/A |
| F.3.3.6 | Rated current or rated power ...: | 3A | P |
| F.3.3.7 | Equipment with multiple supply connections | No such construction | N/A |
| F.3.4 | Voltage setting device | No such construction | N/A |
| F.3.5 | Terminals and operating devices | No such marking provided | N/A |
| F.3.5.1 | Mains appliance outlet and socket-outlet markings | As above | N/A |
| F.3.5.2 | Switch position identification marking.....: | As above | N/A |
| F.3.5.3 | Replacement fuse identification and rating markings | As above | N/A |
| F.3.5.4 | Replacement battery identification marking.....: | As above | N/A |
| F.3.5.5 | Terminal marking location | As above | N/A |
| F.3.6 | Equipment markings related to equipment classification | Class III Equipment | N/A |
| F.3.6.1 | Class I Equipment | Class III Equipment | N/A |
| F.3.6.1.1 | Protective earthing conductor terminal | | N/A |
| F.3.6.1.2 | Neutral conductor terminal | | N/A |
| F.3.6.1.3 | Protective bonding conductor terminals | | N/A |
| F.3.6.2 | Class II equipment (IEC60417-5172) | | N/A |
| F.3.6.2.1 | Class II equipment with or without functional earth | | N/A |
| F.3.6.2.2 | Class II equipment with functional earth terminal marking | | N/A |
| F.3.7 | Equipment IP rating marking ...: | IPX0 | N/A |
| F.3.8 | External power supply output marking | No such construction | N/A |
| F.3.9 | Durability, legibility and permanence of marking | In compliance (See F.3.10) | P |
| F.3.10 | Test for permanence of markings | Marking is legible & durable, no curling observed | P |
| F.4 | Instructions | In compliance | P |
| | a) Equipment for use in locations where children not likely to be present - marking | | N/A |
| | b) Instructions given for installation or initial use | In compliance | P |

Ratnesh

Page 27 of 57

Tested By:

Jitendra

Issued By:



AA Electro Magnetic Test Laboratory Private Limited



Report No. AAEML/S-ELEC/201119-03

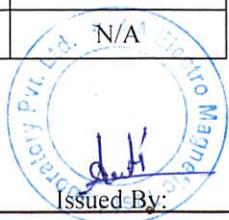
Dated: 05/01/2021

ULR No. TC85972100000008F

| | | | |
|------------|---|-------------------------|-----|
| | c) Equipment intended to be fastened in place | | N/A |
| | d) Equipment intended for use only in restricted access area | | N/A |
| | e) Audio equipment terminals classified as ES3 and other equipment with terminals marked in accordance F.3.6.1 | | N/A |
| | f) Protective earthing employed as safeguard | | N/A |
| | g) Protective earthing conductor current exceeding ES 2 limits | | N/A |
| | h) Symbols used on equipment | | N/A |
| | i) Permanently connected equipment not provided with all-pole mains switch | | N/A |
| | j) Replaceable components or modules providing safeguard function | | N/A |
| F.5 | Instructional safeguards | In compliance | P |
| | Where "instructional safeguard" is referenced in the test report it specifies the required elements, location of marking and/or instruction | | P |
| G | COMPONENTS | | P |
| G.1 | Switches | No such construction | N/A |
| G.1.1 | General | | N/A |
| G.1.2 | Requirements | | N/A |
| G.1.2 | Test method and compliance criteria | | N/A |
| G.2 | Relays | No relay used | N/A |
| G.2.1 | Requirements | As above | N/A |
| G.2.2 | Overload test | As above | N/A |
| G.2.3 | Relay controlling connectors supply power | As above | N/A |
| G.2.4 | Mains relay, modified as stated in G.2 | As above | N/A |
| G.3 | Protection Devices | | N/A |
| G.3.1 | Thermal cut-offs | No thermal cut-off used | N/A |

Rohitush
Tested By:

Page 28 of 57





AA Electro Magnetic Test Laboratory Private Limited



Report No. AAEML/S-ELEC/201119-03

Dated: 05/01/2021

ULR No. TC85972100000008F

| | | | |
|------------------|--|----------------------------------|-----|
| G.3.1.1a) &b) | Thermal cut-outs separately approved according to IEC 60730 with conditions indicated in a) & b) | As above | N/A |
| G.3.1.1c) | Thermal cut-outs tested as part of the equipment as indicated in c) | As above | N/A |
| G.3.1.2 | Thermal cut-off connections maintained and secure | As above | N/A |
| G.3.2 | Thermal links | As above | N/A |
| G.3.2.1a) | Thermal links separately tested with IEC 60691 | As above | N/A |
| G.3.2.1b) | Thermal links tested as part of the equipment | As above | N/A |
| | Aging hours (H).....: | As above | N/A |
| | Single Fault Condition.....: | As above | N/A |
| | Test Voltage (V) and Insulation Resistance (Ω)..: | As above | N/A |
| G.3.2.2 | Test method and compliance criteria | As above | N/A |
| G.3.3 | PTC Thermistors | No PTC thermistor used | N/A |
| G.3.4 | Overcurrent protection devices | | N/A |
| G.3.5 | Safeguards components not mentioned in G.3.1 to G.3.5 | In compliance | P |
| G.3.5.1 | Non-resettable devices suitably rated and marking provided | In compliance | P |
| G.3.5.2 | Single faults conditions | In compliance | P |
| G.4 | Connectors | | N/A |
| G.4.1 | Spacings: | No such connector within the EUT | N/A |
| G.4.2 | Mains connector configuration ..: | | N/A |
| G.4.3 | Plug is shaped that insertion into mains socketoutlets or appliance coupler is unlikely | | N/A |
| G.5 | Wound Components | No such component used | N/A |
| G.5.1 | Wire insulation in wound component. | As above | N/A |
| G.5.1.1 | General | As above | N/A |
| G.5.1.2 a) | Two wires in contact inside wound component, angle between 45° and 90° | As above | N/A |
| G.5.1.2 b) | Construction subject to routine testing | As above | N/A |
| G.5.2 | Endurance test on wound components | As above | N/A |

Rahush

Page 29 of 57

Tested By:

Issued By:



AA Electro Magnetic Test Laboratory Private Limited



TC-8597

| | |
|-----------------------------------|-------------------|
| Report No. AAEMT/S-ELEC/201119-03 | Dated: 05/01/2021 |
| ULR No. TC85972100000008F | |

| | | | |
|--------------|--|---------------------|-----|
| G.5.2.1 | General test requirements | As above | N/A |
| G.5.2.2 | Heat run test | As above | N/A |
| | Time (s) | As above | N/A |
| | Temperature (°C) | As above | N/A |
| G.5.2.3 | Wound component supplied from the mains | As above | N/A |
| G.5.2.4 | Compliance criteria | As above | N/A |
| G.5.3 | Transformers | Class III Equipment | N/A |
| G.5.3.1 | Requirements applied (IEC61204-7, IEC61558-1/-2, and/or IEC62368-1)..: | | N/A |
| | Position.....: | | N/A |
| | Method of protection | | N/A |
| G.5.3.2 | Insulation | | N/A |
| G.5.3.2.1 | Requirements | | N/A |
| | Protection from displacement of windings.....: | | N/A |
| G.5.3.2.2 | Compliance criteria | | N/A |
| G.5.3.3 | Transformer Overload tests.....: | | N/A |
| G.5.3.3.1 | Test conditions | | N/A |
| G.5.3.3.2 | Compliance criteria | | N/A |
| G.5.3.3.3 | Winding Temperatures - Alternative test method | | N/A |
| G.5.3.4 | Transformer using fully insulated winding wire (FIW)..... | | N/A |
| G.5.3.4.1 | General | | N/A |
| G.5.3.4.2 | Transformer with basic insulation only | | N/A |
| G.5.3.4.3 | Transformer with double insulation or reinforced insulation | | N/A |
| G.5.3.4.4 | Transformer with FIW Wound on metal or ferrite core | | N/A |
| G.5.3.4.5 | Thermal cyclic test and compliance | | N/A |
| G.5.3.4.6 | Partial discharge test | | N/A |
| G.5.3.4.7 | Routine test | | N/A |
| G5.4 | Motors | | N/A |
| G.5.4.1 | General requirements | | N/A |

Rakesh

Tested By:

Page 30 of 57

Issued By



| | |
|-----------------------------------|-------------------|
| Report No. AAEMT/S-ELEC/201119-03 | Dated: 05/01/2021 |
| ULR No. TC85972100000008F | |

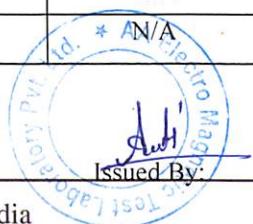
| | | |
|------------|--|---|
| | Position | N/A |
| G.5.4.2 | Motor overload Test conditions | N/A |
| G.5.4.3 | Running overload test | N/A |
| G.5.4.4 | Locked-rotor overload test | N/A |
| G.5.4.4.1 | Test method.....: | N/A |
| G.5.4.4.2 | Compliance Criteria | N/A |
| G.5.4.5 | Running overload test for d.c. motors in secondary circuits | N/A |
| G.5.4.5.1 | Requirements | N/A |
| G.5.4.5.2 | Tested in the unit Electric strength test (V).....: | N/A |
| G.5.4.5.3 | Tested on the Bench - Alternative test method; test time (h) | N/A |
| | Electric strength test (V).....: | N/A |
| G.5.4.6 | Locked-rotor overload test for d.c. motors in secondary circuits | N/A |
| G.5.4.6.1 | Requirements | N/A |
| G.5.4.6.2 | Tested in the unit | N/A |
| | Maximum Temperature | N/A |
| | Electric strength test (V) | N/A |
| G.5.4.6.3 | Tested on the bench - Alternative test method; test time (h) | N/A |
| | Electric strength test (V).....: | 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 | N/A |
| G.6 | Wire Insulation | N/A |
| G.6.1 | General | N/A |
| G.6.2 | Solvent-based enamel wiring insulation | N/A |
| G.7 | Mains supply cords | Class III Equipment not directly connected to mains |
| G.7.1 | General requirements | N/A |
| G.7.2 | Type..... | N/A |
| | Rated current (A).....: | N/A |

Rathush

Page 31 of 57

Tested By:

Issued By:





AA Electro Magnetic Test Laboratory Private Limited



TC-8597

| | |
|-----------------------------------|-------------------|
| Report No. AAEMT/S-ELEC/201119-03 | Dated: 05/01/2021 |
| ULR No. TC859721000000008F | |

| | | | |
|-----------|---|--|-----|
| | Cross-sectional area (mm ²), (AWG)..: | | N/A |
| G.7.3 | Cord anchorages and strain relief for non detachable power supply cords | | N/A |
| G.7.3.1 | General | | N/A |
| G.7.3.2 | Cord strain relief | | N/A |
| 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 | Mass (g): | | N/A |
| | Diameter (m).....: | | N/A |
| | Temperature (°C).....: | | N/A |
| 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 method Compliance Criteria...: | | N/A |
| G.8 | Varistors | No Varistors used in equipment | N/A |
| G.8.1 | General requirements | | N/A |
| G.8.2 | Safeguard 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 |
| G.9 | Integrated Circuit (IC) Current Limiters | No IC current limiter provided within the equipment. | N/A |
| G.9.1 a) | Manufacturer defines limit at max. 5A. | As above | N/A |
| G.9.1 b) | Limiters do not have manual operator or reset | As above | N/A |
| G.9.1 c) | IC limiter output current (max. 5A) .: | As above | N/A |

Ratnesh

Page 32 of 57

Tested By:

Issued By:

Report No. AAEMT/S-ELEC/201119-03

Dated: 05/01/2021

ULR No. TC85972100000008F

| | | | |
|-------------|--|--|-----|
| G.9.1 d) | Manufacturers' defined drift | As above | N/A |
| G.9.1 e) | Supply source does not exceed 250 VA | As above | N/A |
| G.9.2 | Test Program | As above | N/A |
| G.9.3 | Compliance criteria | As above | N/A |
| G.10 | Resistors | | N/A |
| G.10.1 | General requirements | | N/A |
| G.10.2 | Conditioning | | N/A |
| 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 |
| G.11 | Capacitor and RC units | | 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 |
| G.12 | Optocouplers | No opt coupler used | N/A |
| | Optocouplers comply with IEC 60747-5-5:2007 Spacing or Electric Strength Test (specify option and test results)..... | As above | N/A |
| | Type test voltage Vini a....: | As above | N/A |
| | Routine test voltage, Vini,b .: | As above | N/A |
| G.13 | Printed boards | Certified PCB used see table (4.1.2) | P |
| G.13.1 | General requirements | As above | P |
| G.13.2 | Uncoated printed boards | As above | P |
| G.13.3 | Coated printed boards | No coated printed board provided within the equipment. | N/A |
| G.13.4 | Insulation between conductors on the same inner surface | | N/A |
| | Compliance with cemented joint requirements (Specify construction) | | N/A |
| G.13.5 | Insulation between conductors on different surfaces | | N/A |
| | Distance through insulation..... | | N/A |
| | Number of insulation layers (pcs)..: | | N/A |

Ratnesh

Tested By:

Page 33 of 57

Issued By:



Report No. AAEMT/S-ELEC/201119-03

Dated: 05/01/2021

ULR No. TC859721000000008F

| | | | |
|-------------|---|--|-----|
| G.13.6 | Tests on coated printed boards | | N/A |
| G.13.6.1 | Sample preparation and preliminary inspection | | N/A |
| G.13.6.2a) | Thermal conditioning | | N/A |
| G.13.6.2b) | Electric strength test | | N/A |
| G.13.6.2c) | Abrasion resistance test | | N/A |
| G.14 | Coating on components terminals | | N/A |
| G.14.1 | Requirements | | N/A |
| G.14.2 | Test method and compliance criteria | | N/A |
| G.15 | Pressurized Liquid filled components | | N/A |
| G.15.1 | General requirements | | N/A |
| G.15.2 | Test method and compliance criteria | | 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 |
| G.15.2.4 | Vibration test | | N/A |
| G.15.2.5 | Thermal cyclic test | | N/A |
| G.15.2.6 | Force test | | N/A |
| G.15.3 | Compliance and test methods | | N/A |
| G.16 | IC including capacitor discharge function (ICX) | | N/A |
| G.16.1 | Requirements | | N/A |
| G.16.2 a) | Humidity treatment in accordance with cl. 5.4.8 – 120 hours | | N/A |
| b) | Impulse test using circuit 2 with $U_c =$ to transient voltage | | N/A |
| C1) | Application of ac voltage at 110% of rated voltage for 2.5 minutes | | N/A |
| C2) | Test voltage | | N/A |
| D1) | 10,000 cycles on and off using capacitor with smallest capacitance resistor with largest resistance specified by manufacturer | | N/A |
| D2) | Capacitance | | N/A |
| D3) | Resistance | | N/A |

Ratnesh

Page 34 of 57

Tested By:

Issued By:



AA Electro Magnetic Test Laboratory Private Limited



TC-8597

Report No. AAEMT/S-ELEC/201119-03

Dated: 05/01/2021

ULR No. TC859721000000008F

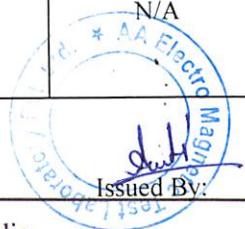
| | | | |
|----------|---|--|-----|
| H | CRITERIA FOR TELEPHONES RINGING SIGNAL | No such construction | N/A |
| H.1 | General | | N/A |
| H.2 | Method A | | N/A |
| H.3 | Method B | | N/A |
| H.3.1 | Ringing signal | | N/A |
| H.3.1.1 | Frequency (Hz) | | N/A |
| H.3.1.2 | Voltage (V) | | N/A |
| H.3.1.3 | Cadence; time (s) and voltage (V) .. | | N/A |
| H.3.1.4 | Single fault current (mA): | | N/A |
| 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 complied with | | N/A |
| H.3.2.2 | Tripping device | | N/A |
| H.3.2.3 | Monitoring voltage (V).....: | | N/A |
| J | INSULATED WINDING WIRES FOR USE WITHOUT INTERLEAVED INSULATION | | N/A |
| | General requirements | | N/A |
| K | SAFETY INTERLOCKS | No safety interlock provided within the equipment. | N/A |
| K.1 | General requirements | | N/A |
| K.2 | Components of safety interlock safeguard mechanism . | | N/A |
| K.3 | Inadvertent change of operating mode | | N/A |
| K.4 | Interlock safeguard override | | N/A |
| K.5 | Fail-safe | | N/A |
| | Compliance.....: | | N/A |
| K.6 | Mechanically operated safety interlocks | | N/A |
| K.6.1 | Endurance requirement | | N/A |
| K.6.2 | Compliance and Test method.....: | | N/A |
| K.7 | Interlock circuit isolation | | N/A |
| K.7.1 | Separation distance for contact gaps & interlock circuit elements (type and circuit location): | | N/A |

Tested By:

Ratnesh

Page 35 of 57

Issued By:





Report No. AAEMT/S-ELEC/201119-03
ULR No. TC859721000000008F

Dated: 05/01/2021

| | | | |
|----------|--|-----------------|-----|
| K.7.2 | Overload test, Current (A).....: | | N/A |
| K.7.3 | Endurance test | | N/A |
| K.7.4 | Electric strength test: | | N/A |
| L | DISCONNECT DEVICES | Class III EUT | N/A |
| L.1 | General requirements | | N/A |
| L.2 | Permanently connected equipment | | N/A |
| L.3 | Parts that remain energized | | N/A |
| L.4 | Single phase equipment | | N/A |
| L.5 | Three-phase equipment | | N/A |
| L.6 | Switches as disconnect devices | | N/A |
| L.7 | Plugs as disconnect devices | | N/A |
| L.8 | Multiple power sources | | N/A |
| M | EQUIPMENT CONTAINING BATTERIES AND THEIR PROTECTION CIRCUITS | | N/A |
| M.1 | General requirements | No battery used | N/A |
| M.2 | Safety of batteries and their cells | | N/A |
| M.2.1 | Requirements | | N/A |
| M.2.2 | Compliance and test method (identify method)....: | | N/A |
| M.3 | Protection circuits | | N/A |
| M.3.1 | Requirements | | N/A |
| M.3.2 | Tests | | N/A |
| | - Overcharging of a rechargeable battery | | N/A |
| | - Unintentional charging of a non-rechargeable battery | | N/A |
| | - Reverse charging of a rechargeable battery | | N/A |
| | - Excessive discharging rate for any battery | | N/A |
| M.3.3 | Compliance | | N/A |
| M.4 | Additional safeguards for equipment containing secondary lithium battery | | N/A |
| M.4.1 | General | | N/A |
| M.4.2 | Charging safeguards | | N/A |
| M.4.2.1 | Charging operating limits | | N/A |

Ratnesh

Page 36 of 57

Tested By:

Issued By:



AA Electro Magnetic Test Laboratory Private Limited



Report No. AAEMLT/S-ELEC/201119-03

Dated: 05/01/2021

ULR No. TC859721000000008F

| | | | |
|------------|---|--|-----|
| M.4.2.2a) | Charging voltage, current and temperature.....: | | N/A |
| M.4.2.2 b) | Single faults in charging circuitry .: | | N/A |
| M.4.3 | Fire Enclosure | | N/A |
| M.4.4 | Endurance of equipment containing a secondary lithium battery | | N/A |
| M.4.4.2 | Preparation | | N/A |
| M.4.4.3 | Drop and charge/discharge function tests | | N/A |
| | Drop | | N/A |
| | Charge | | N/A |
| | Discharge | | N/A |
| M.4.4.4 | Charge-discharge cycle test | | N/A |
| M.4.4.5 | Result of charge-discharge cycle test | | N/A |
| M.5 | Risk of burn due to short circuit during carrying | | N/A |
| M.5.1 | Requirement | | N/A |
| M.5.2 | Compliance and Test Method (Test of P.2.3) | | N/A |
| M.6 | Prevention of short circuits and protection from other effects of electric current | | N/A |
| M.6.1 | Short circuits | | N/A |
| M.6.1.1 | General requirements | | N/A |
| M.6.1.2 | Test method to simulate an internal fault | | N/A |
| M.6.1.3 | Compliance (Specify M.6.1.2 or alternative method) | | N/A |
| M.6.2 | Leakage current (mA) | | N/A |
| M.7 | Risk of explosion from lead acid and NiCd batteries | | N/A |
| M.7.1 | Ventilation preventing explosive gas concentration | | N/A |
| M.7.2 | Compliance and test method | | N/A |
| M.8 | Protection against internal ignition from external spark sources of lead acid batteries | | N/A |
| M.8.1 | General requirements | | N/A |
| M.8.2 | Test method | | N/A |
| M.8.2.1 | General requirements | | N/A |

Ratnesh

Page 37 of 57

Tested By:

Issued By:



AA Electro Magnetic Test Laboratory Private Limited



TC-8597

Report No. AAEMT/S-ELEC/201119-03

Dated: 05/01/2021

ULR No. TC85972100000008F

| | | | |
|----------|---|-----------------------|-----|
| M.8.2.2 | Estimation of hypothetical volume V_z (m^3/s).....: | | N/A |
| M.8.2.3 | Correction factors.....: | | N/A |
| M.8.2.4 | Calculation of distance d (mm) ...: | | N/A |
| M.9 | Preventing electrolyte spillage | | N/A |
| M.9.1 | Protection from electrolyte spillage | | N/A |
| M.9.2 | Tray for preventing electrolyte spillage | | N/A |
| M.10 | Instructions to prevent reasonably foreseeable misuse (Determination of compliance: inspection, data review; or abnormal testing) | | N/A |
| N | ELECTROCHEMICAL POTENTIALS | | N/A |
| | Metal(s) used | | N/A |
| O | MEASUREMENT OF CREEPAGE DISTANCES AND CLEARANCES | | N/A |
| | Figures O.1 to O.20 of this Annex applied: | | N/A |
| P | SAFEGUARDS AGAINST ENTRY OF FOREIGN OBJECTS AND SPILLAGE OF INTERNAL LIQUIDS | | N/A |
| P.1 | General requirements | No such construction | N/A |
| P.2.2 | Safeguards against entry of foreign object | | N/A |
| | Location and Dimensions (mm) | | N/A |
| P.2.3 | Safeguard against the consequences of entry of foreign object | | N/A |
| P.2.3.1 | Safeguards against the entry of a foreign object | | N/A |
| | Openings in transportable equipment | | N/A |
| | Transportable equipment with metallized plastic parts | | N/A |
| P.2.3.2 | Openings in transportable equipment in relation to metallized parts of a barrier or enclosure (identification of supplementary safeguard) | | N/A |
| P.3 | Safeguards against spillage of internal liquids | No such construction. | N/A |
| P.3.1 | General requirements | | N/A |
| P.3.2 | Determination of spillage consequences | | N/A |
| P.3.3 | Spillage safeguards | | N/A |

Ratnesh

Tested By:

Page 38 of 57

Issued By:



AA Electro Magnetic Test Laboratory Private Limited



TC-8597

Report No. AAEMT/S-ELEC/201119-03

Dated: 05/01/2021

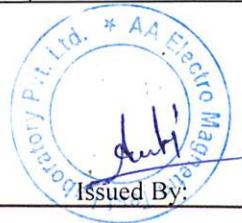
ULR No. TC859721000000008F

| | | | |
|----------|---|-------------------------------|---------------------------------------|
| P.3.4 | Safeguards effectiveness | | N/A |
| P.4 | Metallized coatings and adhesive securing parts | No such construction. | N/A |
| P.4.2 a) | Conditioning testing | | N/A |
| | Tc (°C).....: | | N/A |
| | Tr (°C).....: | | N/A |
| | Ta (°C).....: | | N/A |
| P.4.2 b) | Abrasion testing | | N/A |
| P.4.2 c) | Mechanical strength testing | | N/A |
| Q | CIRCUITS INTENDED FOR INTERCONNECTION WITH BUILDING WIRING | | P |
| Q.1 | Limited power sources | In compliance (See table Q.1) | P |
| Q.1.1 a) | Inherently limited output | In compliance | P |
| Q.1.1 b) | Impedance limited output - Regulating network limited output under normal operating and simulated single fault condition | As above | N/A |
| Q.1.1 c) | Overcurrent protective device limited output | | N/A |
| Q.1.1 d) | IC current limiter complying with G.9 | | N/A |
| Q.1.2 | Compliance and test method | In compliance | P |
| Q.2 | Test for external circuits – paired conductor cable Maximum output current (A) | No such construction | N/A |
| | Current limiting method.....: | | N/A |
| R | LIMITED SHORT CIRCUIT TEST | | N/A |
| R.1 | General requirements | | N/A |
| R.2 | Determination of the overcurrent protective device and circuit | | N/A |
| R.3 | Test method Supply voltage (V) and short-circuit current (A)). | | N/A |
| S | TESTS FOR RESISTANCE TO HEAT AND FIRE | | N/A <i>(Refer table 4.1.2)</i> |

Ratnesh

Tested By:

Page 39 of 57



Issued By:



AA Electro Magnetic Test Laboratory Private Limited



TC-8597

Report No. AAEMT/S-ELEC/201119-03

Dated: 05/01/2021

ULR No. TC859721000000008F

| | | | |
|-----|--|---|-----|
| S.1 | Flammability test for fire enclosures and fire barrier materials of equipment where the steady state power does not exceed 4 000 W | Safety certified material used (Refer table 4.1.2) | N/A |
| | Samples, material | | N/A |
| | Wall thickness (mm)..... | | N/A |
| | Conditioning (°C)..... | | N/A |
| | Test flame according to IEC 60695-11-5 with conditions as set out | | N/A |
| | - Material not consumed completely | | N/A |
| | - Material extinguishes within 30s | | N/A |
| | - No burning of layer or wrapping tissue | | N/A |
| S.2 | Flammability test for fire enclosure and fire barrier integrity | Safety certified material used (Refer table 4.1.2) | N/A |
| | Samples, material | | N/A |
| | Wall thickness (mm)..... | | N/A |
| | Conditioning (°C)..... | | N/A |
| | Test flame according to IEC 60695-11-5 with conditions as set out | | N/A |
| | Test specimen does not show any additional hole | | N/A |
| S.3 | Flammability test for the bottom of a fire enclosure | Safety certified material used (Refer table 4.1.2) | N/A |
| | Samples, material | | N/A |
| | Wall thickness (mm) Cheesecloth did not ignite | | N/A |
| S.4 | Flammability classification of materials | Safety certified material used (Refer table 4.1.2) | N/A |
| S.5 | Flammability test for fire enclosures and fire barrier materials of equipment where the steady state power does not exceed 4 000 W | Safety certified material used (Refer table 4.1.2) | N/A |
| | Samples, material | | N/A |
| | Wall thickness (mm)..... | | N/A |
| | Conditioning (test condition), (°C).... | | N/A |
| | Test flame according to IEC 60695-11-20 with conditions as set out | | N/A |

Rahul

Page 40 of 57

Tested By:

Issued By:



Report No. AAEMT/S-ELEC/201119-03

Dated: 05/01/2021

ULR No. TC859721000000008F

| | | | |
|----------|---|---------------------------------------|-----|
| | After every test specimen was not consumed completely | | N/A |
| | After fifth flame application, flame extinguished within 1 min | | N/A |
| T | MECHANICAL STRENGTH TESTS | In compliance | P |
| T.1 | General requirements | In compliance | P |
| T.2 | Steady force test, 10 N | In compliance | P |
| T.3 | Steady force test, 30 N | No such construction | N/A |
| T.4 | Steady force test, 100 N | In compliance | P |
| T.5 | Steady force test, 250 N | In compliance | P |
| T.6 | Enclosure impact test | Stationary equipment | N/A |
| | Fall test | As above | N/A |
| | Swing test | As above | N/A |
| T.7 | Drop test | Stationary equipment | N/A |
| T.8 | Stress relief test..... | In compliance (See table T.8) | P |
| T.9 | Impact Test (glass) | No such construction | N/A |
| T.9.1 | General requirements | | N/A |
| T.9.2 | Impact test and compliance | | N/A |
| | Impact energy (J) | | N/A |
| | Height (m)..... | | N/A |
| T.10 | Glass fragmentation test..... | | N/A |
| T.11 | Test for telescoping or rod antennas | | N/A |
| U | MECHANICAL STRENGTH OF CATHODE RAY TUBES (CRT) AND PROTECTION AGAINST THE EFFECTS OF IMPLOSION | No CRT provided within the equipment. | N/A |
| U.1 | General requirements | | N/A |
| U.2 | Compliance and test method for non-intrinsically protected CRTs | See above. | N/A |
| U.3 | Protective Screen..... | See above. | N/A |
| V | DETERMINATION OF ACCESSIBLE PARTS (FINGERS, PROBES AND WEDGES) | | N/A |
| V.1 | Accessible parts of equipment | | N/A |
| V.2 | Accessible part criterion | | N/A |

Ratnesh

Tested By:





AA Electro Magnetic Test Laboratory Private Limited



Report No. AAEMT/S-ELEC/201119-03

Dated: 05/01/2021

ULR No. TC859721000000008F

| 4.1.2 TABLE: List of critical components | | | | | P |
|---|--|---------------------|------------------------|--|-----------------------|
| Object / part No. | Manufacturer/ trademark | Type / model | Technical data | Standard | Mark(s) of conformity |
| Plastic Enclosure | COVESTRO DEUTSCHLAND AG [PC RESINS] | FR3016 W + | V-0, 80°C | UL 94/ IEC 60695-11-10 | UL: E41613 |
| PCB | ELITE MATERIAL CO LTD | EM-MP | V-0, 140°C | UL 94/ IEC 60695-11-10 | UL: E15Q504 |
| DC Fan | SUNONWEALTH ELECTRIC MACHINE INDUSTRY CO LTD | MF30100V1-10000-S99 | 5Vdc, 0.69W | UL 507/ Harmonized with Annex B of IEC 60950-1 | UL: E77551 |
| Internal Wire | REI HSING WIRE CO LTD | 1569 | 300Vac, 80°C, 22AWG | UL758/ No equivalent IEC standard | UL: E108485 |
| Accessories | | | | | |
| Adaptor | Netradyne | D-210-AD3 | 12-6V, 3A | IEC 62368 | CE |
| Supplementary information:- The conformity certificate of critical components mentioned above have been verified by lab & found satisfactory. | | | | | |

Page 42 of 57

Tested By:

Issued By:

Plot No.174, Udyog Vihar Phase 4, Sector -18, Gurgaon -122016, Haryana, India
 Contact:0124-4235350, 4145343, e-mail: info@aaemtlabs.com, Website: www.aaemtlabs.com





AA Electro Magnetic Test Laboratory Private Limited



TC-8597

Report No. AAEMLT/S-ELEC/201119-03

Dated: 05/01/2021

ULR No. TC859721000000008F

| | | |
|---------------------|---|-----|
| 4.8.4, 4.8.5 | TABLE: Lithium coin/button cell batteries mechanical tests | N/A |
|---------------------|---|-----|

(The following mechanical tests are conducted in the sequence noted.)

| | | |
|----------------|----------------------------------|---|
| 4.8.4.2 | TABLE: Stress relief test | — |
|----------------|----------------------------------|---|

| Part | Material | Oven Temperature (°C) | Comments |
|------|----------|-----------------------|----------|
| -- | -- | -- | -- |

Supplementary information: No Battery used

| | | |
|----------------|--|---|
| 4.8.4.3 | TABLE: Battery replacement test | — |
|----------------|--|---|

| | | |
|---------------------------------|------------------------------------|----------|
| Battery part no.: | | — |
| Battery Installation/withdrawal | Battery Installation/Removal Cycle | Comments |
| | 1 | -- |
| | 2 | -- |
| | 3 | -- |
| | 4 | -- |
| | 5 | -- |
| | 6 | -- |
| | 8 | -- |
| | 9 | -- |
| | 10 | -- |

| | | |
|----------------|-------------------------|-----|
| 4.8.4.4 | TABLE: Drop test | N/A |
|----------------|-------------------------|-----|

(The following mechanical tests are conducted in the sequence noted.)

| Impact Area | Drop Distance | Drop No. | Observations |
|-------------|---------------|----------|--------------|
| -- | -- | 1 | -- |
| -- | -- | 2 | -- |
| -- | -- | 3 | -- |

Supplementary information: No Battery used

Tested By:
Ratnesh

Page 43 of 57

Issued By:
Sunita



Report No. AAEMT/S-ELEC/201119-03

Dated: 05/01/2021

ULR No. TC85972100000008F

| | | | | |
|---------------------|-------------------|----------------|--------------------|----------------------------|
| 4.8.4.5 | TABLE: Impact | | | N/A |
| Impacts per surface | | Surface tested | Impact energy (Nm) | Comments |
| | | | | |
| 4.8.4.6 | TABLE: Crush test | | | N/A |
| Test position | | Surface tested | Crushing Force (N) | Duration force applied (s) |
| | | | | |

Supplementary information: No Battery used

| | | | | |
|---------------|--|----------------|-----------|----------------------------|
| 4.8.5 | TABLE: Lithium coin/button cell batteries mechanical test result | | | N/A |
| Test position | | Surface tested | Force (N) | Duration force applied (s) |
| | | | | |

Supplementary information: No Battery used

| | | |
|-----|--|---|
| 5.2 | Table: Classification of electrical energy sources | P |
|-----|--|---|

5.2.2.2 – Steady State Voltage and Current conditions

| No. | Supply Voltage | Location (e.g. circuit designation) | Test conditions | Parameters | | | ES Class |
|-----|----------------|--|-------------------------|-----------------------|--------------------|-----|----------|
| | | | | U (Vrms or Vpk) | I (Apk or Arms) | Hz | |
| 1. | 12V DC | Internal circuit | Normal | 12.03V DC | 0.615 | DC | ES1 |
| | | | Abnormal | --- | --- | --- | |
| | | | Single fault – SC/OC | --- | --- | --- | |

Rathush

Tested By:

Page 44 of 57



Issued By:



AA Electro Magnetic Test Laboratory Private Limited



TC-8597

Report No. AAEMT/S-ELEC/201119-03

Dated: 05/01/2021

ULR No. TC859721000000008F

| 5.2.2.3 – Capacitance Limits | | | | | | N/A |
|------------------------------|----------------|-------------------------------------|----------------------|-----------------|---------|----------|
| No. | Supply Voltage | Location (e.g. circuit designation) | Test conditions | Parameters | | ES Class |
| | | | | Capacitance, nF | Upk (V) | |
| -- | -- | -- | Normal | -- | -- | -- |
| | | | Abnormal | -- | -- | |
| | | | Single fault – SC/OC | -- | -- | |
| 5.2.2.4 – Single Pulses | | | | | | N/A |
| No. | Supply Voltage | Location (e.g. circuit designation) | Test conditions | Parameters | | ES Class |
| | | | | Duration (ms) | Upk (V) | |
| -- | -- | -- | Normal | -- | -- | -- |
| | | | Abnormal | -- | -- | |
| | | | Single fault – SC/OC | -- | -- | |
| 5.2.2.5 – Repetitive Pulses | | | | | | N/A |
| No. | Supply Voltage | Location (e.g. circuit designation) | Test conditions | Parameters | | ES Class |
| | | | | Off time (ms) | Upk (V) | |
| -- | -- | -- | Normal | -- | -- | -- |
| | | | Abnormal | -- | -- | |
| | | | Single fault – SC/OC | -- | -- | |

Supplementary information: SC=Short Circuit, OC=Open Circuit

Rathush

Tested By:

Page 45 of 57



Issued By:



Report No. AAEMT/S-ELEC/201119-03

Dated: 05/01/2021

ULR No. TC85972100000008F

| 5.4.1.4, 6.3.2, 9.0, B.2.6 | TABLE: Temperature measurements | | | P |
|--|---|--|-------------------------------|-----------------------------------|
| | Supply voltage (V) | 12 Vdc | | --- |
| | Ambient T_{min} ($^{\circ}$ C) | -- | | --- |
| | Ambient T_{max} ($^{\circ}$ C) | -- | | --- |
| | Tma ($^{\circ}$ C) | 40 $^{\circ}$ C | | --- |
| Maximum measured temperature T of part/at: (Measured with thermocouple) | | Measured temperature rise at Tamb dT (K) | Calculated temperature at Tma | Allowed T_{max} ($^{\circ}$ C) |
| DC Fan | | 9.3 | 49.3 | 77 |
| PCB Material | | 10.5 | 50.5 | 140 |
| Internal enclosure | | 9.5 | 49.5 | 80 |
| External enclosure | | 6.4 | 46.4 | 80 |
| Ambient | | 25.1 | -- | -- |

Supplementary information: *) Temperature limits for winding include less 10K for thermocouple measurement method.

| Temperature T of winding: | t_1 ($^{\circ}$ C) | R_1 (Ω) | t_2 ($^{\circ}$ C) | R_2 (Ω) | T ($^{\circ}$ C) | Allowed T_{max} ($^{\circ}$ C) | Insulation class |
|---------------------------|-----------------------|--------------------|-----------------------|--------------------|-------------------|-----------------------------------|------------------|
| -- | -- | -- | -- | -- | -- | -- | -- |

Supplementary information:

Note 1: Tma should be considered as directed by applicable requirement

Note 2: Tma is not included in assessment of Touch Temperatures (Clause 9)

| 5.4.1.10.3 | TABLE: Ball pressure test of thermoplastics | | | N/A |
|--|---|--------------------------------|--|--------------------------|
| Allowed impression diameter (mm) | | \leq 2 mm | | --- |
| Object/Part No./Material | Manufacturer/trademark | Test temperature $^{\circ}$ C) | | Impression diameter (mm) |
| -- | -- | -- | | -- |

Supplementary information: Class III equipment

Tested By:

Page 46 of 57



Issued By:



AA Electro Magnetic Test Laboratory Private Limited



TC-8597

Report No. AAEMT/S-ELEC/201119-03

Dated: 05/01/2021

ULR No. TC85972100000008F

| 5.4.2.2, 5.4.2.4 and 5.4.3 | TABLE: Minimum Clearances/Creepage distance | | | | | | | N/A |
|--|--|--------|--------------|-----------------|------------------|---------|------------------|---------|
| | Clearance (cl) and creepage distance (cr) at/of/between: | Up (V) | U r.m.s. (V) | Frequency (kHz) | Required cl (mm) | cl (mm) | Required cr (mm) | cr (mm) |
| -- | -- | -- | -- | -- | -- | -- | -- | -- |
| -- | -- | -- | -- | -- | -- | -- | -- | -- |
| -- | -- | -- | -- | -- | -- | -- | -- | -- |
| Supplementary information: Class III equipment | | | | | | | | |

| | | | | | | |
|--|--|----------------------------|--|------------------|------------------|-----|
| 5.4.2.3 | TABLE: Minimum Clearances distances using required withstand voltage | | | | | N/A |
| | Overvoltage Category (OV): | | | | | -- |
| | Pollution Degree: | | | | | -- |
| Clearance distanced between: | | Required withstand voltage | | Required cl (mm) | Measured cl (mm) | |
| -- | | -- | | -- | -- | |
| Supplementary information: Class III equipment | | | | | | |

| | | | | | | |
|--|---|------------------|--|--|--------------------|-----|
| 5.4.2.4 | TABLE: Clearances based on electric strength test | | | | | N/A |
| Test voltage applied between: | | Required cl (mm) | | Test voltage (kV) peak/ r.m.s. / d.c. | Breakdown Yes / No | |
| -- | | -- | | -- | -- | |
| Supplementary information: Class III equipment | | | | | | |

| | | | | | | |
|--|---|-----------------|----------|-------------------|----------|-----|
| 5.4.4.2, 5.4.4.5 c) 5.4.4.9 | TABLE: Distance through insulation measurements | | | | | N/A |
| Distance through insulation di at/of: | Peak voltage (V) | Frequency (kHz) | Material | Required DTI (mm) | DTI (mm) | |
| -- | -- | -- | -- | -- | -- | |
| Supplementary information: Class III equipment | | | | | | |

Ratnesh

Tested By:

Page 47 of 57



Issued By:



AA Electro Magnetic Test Laboratory Private Limited



Report No. AAEML/S-ELEC/201119-03

Dated: 05/01/2021

ULR No. TC859721000000008F

| 5.4.9 | TABLE: Electric strength tests | | | N/A* |
|--|--------------------------------|------------------|-----|-----------------------|
| Test voltage applied between: | Voltage shape (AC, DC) | Test voltage (V) | | Breakdown Yes / No |
| Functional: | -- | -- | -- | -- |
| -- | -- | -- | -- | -- |
| Basic/supplementary: | -- | -- | -- | -- |
| L/N to metal enclosure | -- | -- | -- | -- |
| Reinforced: | -- | -- | -- | -- |
| Primary to wrapped metal foil on front bezel | -- | -- | -- | -- |
| Routine Tests: | N/A | N/A | N/A | N/A |
| Supplementary information: Class III equipment | | | | |

| 5.5.2.2 | TABLE: Stored discharge on capacitors | | | | | N/A |
|--|---|------------------|----------------------------------|------------------------------|---------------------------------------|-------------------|
| Supply Voltage (V), Hz | Test Location | | Operating Condition (N, S) | Switch position On or off | Measured Voltage (after 2 seconds) | ES Classification |
| -- | -- | | -- | -- | -- | -- |
| Supplementary information: Class III equipment | | | | | | |
| 5.6.6.2 | TABLE: Resistance of protective conductors and terminations | | | | | N/A |
| Accessible part | | Test current (A) | Duration (min) | Voltage drop (V) | Resistance (Ω) | |
| -- | | -- | -- | -- | -- | |
| Supplementary information: Class III equipment | | | | | | |

Ratnesh

Page 48 of 57

Tested By:

Issued By:





AA Electro Magnetic Test Laboratory Private Limited



TC-8597

| | |
|-----------------------------------|-------------------|
| Report No. AAEMT/S-ELEC/201119-03 | Dated: 05/01/2021 |
| ULR No. TC859721000000008F | |

| 5.7.2.2, 5.7.4 | TABLE: Earthing accessible conductive part | N/A |
|--|---|--------------------|
| Supply voltage..... | --- | --- |
| Location | Test conditions specified in 6.1 of IEC 60990 or Fault Condition No in IEC 60990 clause 6.2.2.1 through 6.2.2.8, except for 6.2.2.7 | Touch current (mA) |
| -- | -- | -- |
| Supplementary Information: Class III equipment | | |

| 6.2.2 | Table: Electrical power sources (PS) measurements for classification | | | | P | | |
|---|--|----------------------|---------------------|-----------------------|-------------------|--|--|
| Source | Description | Measurement | Max Power after 3 s | Max Power after 5 s*) | PS Classification | | |
| Internal circuit connected to power source | Maximum normal operation | Power : (W) | 0.615 | --- | PS1 | | |
| | | V _A : (V) | 12V dc | --- | | | |
| | | I _A (A) : | 7.38 | --- | | | |
| Supplementary Information: | | | | | | | |
| (*) Measurement taken only when limits at 3 seconds exceed PS1 limits | | | | | | | |

Ratnesh

Page 49 of 57

Tested By:



Issued By:



Report No. AAEMT/S-ELEC/201119-03

Dated: 05/01/2021

ULR No. TC859721000000008F

| 6.2.3.1 | Table: Determination of Potential Ignition Sources (Arcing PIS) | | | | N/A |
|----------|---|---|--|-------------------------|-----|
| Location | Open circuit voltage After 3 s (V _p) | Measured r.m.s current (I _{rms}) | Calculated value (V _p x I _{rms}) | Arcing PIS? Yes / No | |
| -- | -- | -- | -- | -- | |

Supplementary information:

An Arcing PIS requires a minimum of 50 V (peak) a.c. or d.c. An Arcing PIS is established when the product of the open circuit voltage (V_p) and normal operating condition rms current (I_{rms}) is greater than 15.

| 6.2.3.2 | Table: Determination of Potential Ignition Sources (Resistive PIS) | | | | | N/A |
|------------------------|--|--|---|--|--------------------------|-----|
| Circuit Location (x-y) | Operating Condition (Normal / Describe Single Fault) | Measured wattage or VA During first 30 s (W / VA) | Measured wattage or VA After 30 s (W / VA) | Protective Circuit, Regulator, or PTC Operated? Yes / No (Comment) | Resistive PIS? Yes/No | |
| -- | -- | -- | -- | -- | -- | |

Supplementary Information:

A combination of voltmeter, VA and ammeter IA may be used instead of a wattmeter.

If a separate voltmeter and ammeter are used, the product of (VA x IA) is used to determine Resistive PIS classification.

A Resistive PIS: (a) dissipates more than 15 W, measured after 30 s of normal operation, or (b) under single fault conditions has either a power exceeding 100 W measured immediately after the introduction of the fault if electronic circuits, regulators or PTC devices are used, or has an available power exceeding 15 W measured 30 s after introduction of the fault.

Ratnesh

Tested By:

Page 50 of 57





AA Electro Magnetic Test Laboratory Private Limited



TC-8597

Report No. AAEMT/S-ELEC/201119-03

Dated: 05/01/2021

ULR No. TC85972100000008F

| 8.5.5 | TABLE: High Pressure Lamp | N/A | |
|---|---------------------------|--------|------------------------------|
| Description | | Values | Energy Source Classification |
| Lamp type.....: | | | — |
| Manufacturer | | | — |
| Cat no.....: | | | — |
| Pressure (cold) (MPa).....: | | | MS_ |
| Pressure (operating) (MPa).....: | | | MS_ |
| Operating time (minutes).....: | | | — |
| Explosion method.....: | | | — |
| Max particle length escaping enclosure (mm) .: | | | MS_ |
| Max particle length beyond 1 m (mm).....: | | | MS_ |
| Overall result | | | |
| Supplementary information: No high pressure lamp used | | | |

| B.2.5 | TABLE: Input test | | | | | | | P |
|----------------------------|-------------------|-------------|-------|-------------|---------|------------|---------------------|---|
| U (V) | I (A) | I rated (A) | P (W) | P rated (W) | Fuse No | I fuse (A) | Condition/status | |
| 12V DC | 0.615 | 3 | 7.38 | -- | -- | -- | Maximum normal load | |
| Supplementary information: | | | | | | | | |

Rathore

Tested By:

Page 51 of 57



Issued By:



Report No. AAEMT/S-ELEC/201119-03

Dated: 05/01/2021

ULR No. TC85972100000008F

| B.3 | TABLE: Abnormal operating condition tests | | | | | | | | N/A |
|---------------|---|---------------------|---------------|----------|-------------------|---------|------------|-------------|-----|
| Component No. | Fault Condition | Supply voltage, (V) | Test time (h) | Fuse no. | Fuse current, (A) | Tcouple | Temp. (°C) | Observation | |
| -- | -- | -- | -- | -- | -- | -- | -- | -- | |

| B.4 | TABLE: Fault condition tests | | | | | | | | P |
|-----------------|------------------------------|---------------------|----------------|----------|-------------------|----------|------------|--|---|
| Component No. | Fault Condition | Supply voltage, (V) | Test time (ms) | Fuse no. | Fuse current, (A) | T-couple | Temp. (°C) | Observation | |
| Input connector | Short circuit | 12Vdc | 5 minuets | -- | -- | -- | -- | Equipment shut down. No hazards during test. | |

Supplementary information: S-C = short circuit, O-C = open circuit, O-L = over load

Rahul

Tested By:

Page 52 of 57



Issued By:



AA Electro Magnetic Test Laboratory Private Limited



TC-8597

Report No. AAEMT/S-ELEC/201119-03

Dated: 05/01/2021

ULR No. TC859721000000008F

| Annex M | | TABLE: Batteries | | | | | | | | N/A | | |
|---|---|----------------------------|---------------|-------------------------|------------------------|---------------|---------------|---------------|-------------------|-----------------|--|--|
| The tests of Annex M are applicable only when appropriate battery data is not available | | | | | | | | | -- | | | |
| Is it possible to install the battery in a reverse polarity position? | | | | | | | | | -- | | | |
| | | Non-rechargeable batteries | | | Rechargeable batteries | | | | | | | |
| | | Discharging | | Un-intentional charging | Charging | | Discharging | | Reversed charging | | | |
| | | Meas. current | Manuf. Specs. | | Meas. current | Manuf. Specs. | Meas. current | Manuf. Specs. | Meas. current | Manuf. Specs. | | |
| Max. current during normal condition | | -- | -- | -- | -- | -- | -- | -- | -- | -- | | |
| Max. current during fault condition | | -- | -- | -- | -- | -- | -- | -- | -- | -- | | |
| | | | | | | | | | | | | |
| Test results: | | | | | | | | | | Verdict | | |
| - Chemical leaks | | | | | | | | | | No leaks -- | | |
| - Explosion of the battery | | | | | | | | | | No explosion -- | | |
| - Emission of flame or expulsion of molten metal | | | | | | | | | | No emission -- | | |
| - Electric strength tests of equipment after completion of tests | | | | | | | | | | -- -- | | |
| Supplementary information: No Battery used in Equipment | | | | | | | | | | | | |
| Annex M.4 | Table: Additional safeguards for equipment containing secondary lithium batteries | | | | | | | | N/A | | | |
| Battery/Cell No. | | Test conditions | | Measurements | | | | Observation | | | | |
| | | | | U | I (A) | Temp (C) | | | | | | |
| -- | Normal | | | -- | -- | -- | | | | -- | | |
| -- | Abnormal | | | -- | -- | -- | | | | -- | | |
| -- | Single fault -SC/OC | | | -- | -- | -- | | | | -- | | |
| Supplementary Information: No Battery used in Equipment | | | | | | | | | | | | |

Ratnesh

Page 53 of 57

Tested By:



Issued By:



AA Electro Magnetic Test Laboratory Private Limited



Report No. AAEMT/S-ELEC/201119-03

Dated: 05/01/2021

ULR No. TC859721000000008F

| Battery identification | Charging at $T_{\text{lowest}} (\text{°C})$ | Observation | Charging at $T_{\text{highest}} (\text{°C})$ | Observation |
|------------------------|---|-------------|--|-------------|
| -- | -- | -- | -- | -- |

Supplementary Information:

| T.2, T.3, T.4, T.5 | TABLE: Steady force test | | | | | P |
|-----------------------|--------------------------|----------------|----------|---------------------|--------------------|---|
| Part/Location | Material | Thickness (mm) | Force(N) | Test Duration (sec) | Observation | |
| Enclosure | Plastic Enclosure | 2.41 | 10 | 5 | No damage observed | |
| Enclosure | Plastic Enclosure | 2.41 | 100 | 5 | No damage observed | |
| Enclosure | Plastic Enclosure | 2.41 | 250 | 5 | No damage observed | |

Supplementary information:

| T.6, T.9 | TABLE: Impact tests | | | | | N/A |
|---------------|---------------------|----------------|------------------------|-------------|--|-----|
| Part/Location | Material | Thickness (mm) | Vertical distance (mm) | Observation | | |
| -- | -- | -- | -- | -- | | |

Supplementary information: Stationary Equipment

| T.7 | TABLE: Drop tests | | | | | N/A |
|---------------|-------------------|----------------|------------------|-------------|--|-----|
| Part/Location | Material | Thickness (mm) | Drop Height (mm) | Observation | | |
| -- | -- | -- | -- | -- | | |

Supplementary information: Stationary Equipment

Ramkishan

Tested By:

Page 54 of 57



Issued By:



AA Electro Magnetic Test Laboratory Private Limited



TC-8597

Report No. AAEMT/S-ELEC/201119-03

Dated: 05/01/2021

ULR No. TC859721000000008F

| T.8 | TABLE: Stress relief test | | | | | P |
|----------------------------|---------------------------|----------------|-----------------------|--------------|-----------------------------------|---|
| Part/Location | Material | Thickness (mm) | Oven Temperature (°C) | Duration (h) | Observation | |
| Complete Equipment | Plastic Enclosure | 2.41 | 70 | 7hr | No shrinkage or deformation occur | |
| Supplementary information: | | | | | | |

Annex Q.1

TABLE: Circuits intended for interconnection with building wiring (LPS)

P

Note: Measured UOC (V) with all load circuits disconnected:

| Output Circuit | Components | Uoc (V) | Isc (A) | | S (VA) | S (VA) |
|----------------|-------------|---------|---------|-------|--------|--------|
| | | | Meas | Limit | Meas | Limit |
| -- | Type C Port | 5.03 | 1.34 | 8 | 6.74 | 100 |

Supplementary information: S-C = short circuit, O-C = open circuit

Ratnesh

Page 55 of 57

Tested By:



Issued By:

Report No. AAEMT/S-ELEC/201119-03

Dated: 05/01/2021

ULR No. TC859721000000008F

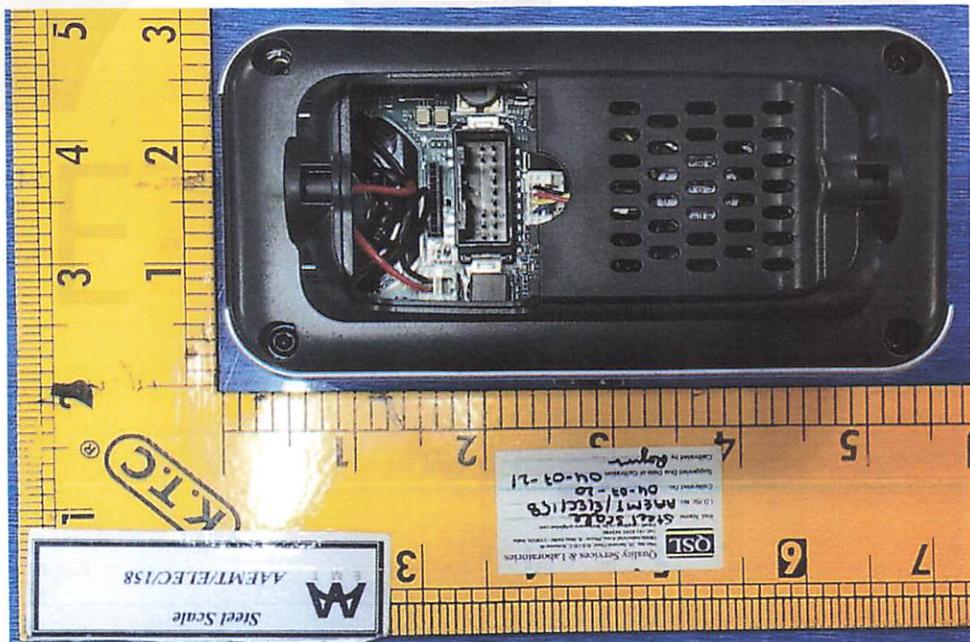
Attachment 1

Photographs

Top View



Bottom View



Ratnesh

Page 56 of 57

Tested By:

Issued By:

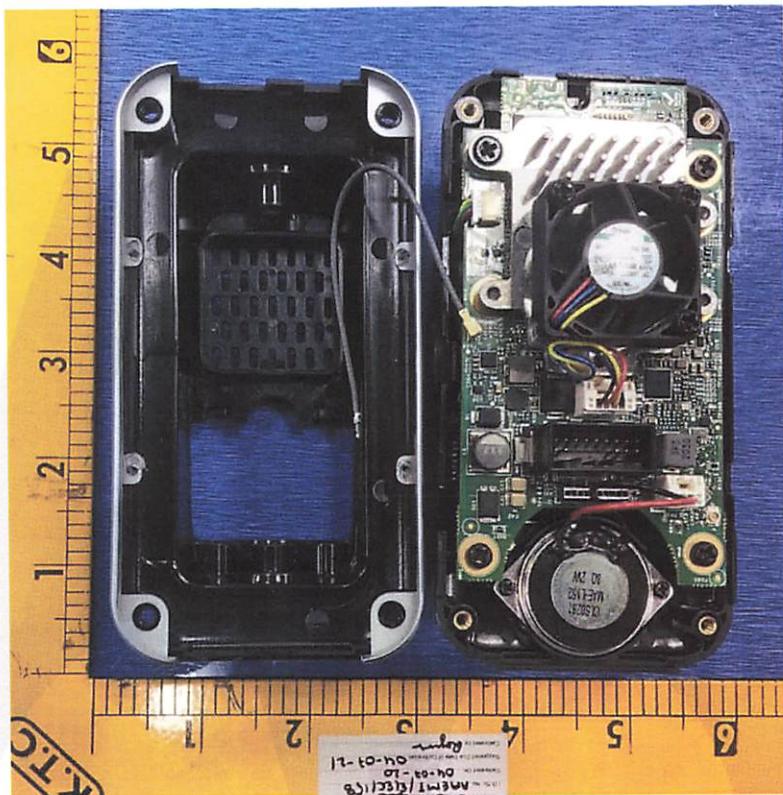


Report No. AAEMT/S-ELEC/201119-03

Dated: 05/01/2021

ULR No. TC859721000000008F

Internal View



End of test report

For AA Electro Magnetic Test Laboratory

Authorised Signatory

Ratnesh

Page 57 of 57

Tested By:

Plot No.174, Udyog Vihar Phase 4, Sector -18, Gurgaon -122016, Haryana, India
Contact:0124-4235350, 4145343, e-mail: info@aaemtlabs.com, Website: www.aaemtlabs.com

