**Test Report issued under the responsibility of:**

# TEST REPORT

## IEC 60950-1
## Information technology equipment – Safety – Part 1: General requirements

| | |
|---|---|
| **Report Number. ..... :** | 161200822SHA-001 |
| **Date of issue ..... :** | 2017-03-14, **Modification 1, 2017-06-30** |
| **Total number of pages ..... :** | 35 |
| **Applicant's name ..... :** | GlobTek, Inc. |
| **Address ..... :** | 186 Veterans Dr. Northvale, NJ 07647 USA |
| **Test specification:** | |
| **Standard ..... :** | IEC 60950-1:2005 (Second Edition) + Am 1:2009 + Am 2:2013 |
| **Test procedure ..... :** | CB Scheme |
| **Non-standard test method ..... :** | N/A |
| **Test Report Form No. ..... :** | IEC60950_1F |
| **Test Report Form(s) Originator .... :** | SGS Fimko Ltd |
| **Master TRF ..... :** | Dated 2014-02 |

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**General disclaimer:**

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| | |
|---|---|
| **Test item description** ..... : | ITE POWER SUPPLY |
| **Trade Mark** ..... : | GlobTek, Inc. |
| **Manufacturer** ..... : | Same as applicant |
| **Model/Type reference** ..... : | GT*961200P****, GT*96900P**** and GT*41133-*****<br>(Refer to page 9-10 for details.) |
| **Ratings** ..... : | Input: 100-240V~, 50-60Hz, 1.5A;<br>Output: Refer to page 10 for details. |

| | | | |
|---|---|---|---|
| **Testing procedure and testing location:** | | | |
| ☒ | **CB Testing Laboratory:** | Intertek Testing Services Shanghai | |
| **Testing location/ address.....:** | | Building No. 86, 1198 Qinzhou Road (North) 200233 Shanghai CHINA | |
| ☐ | **Associated CB Testing Laboratory:** | N/A | |
| **Testing location/ address.....:** | | | |
| **Tested by (name + signature).....:** | | Albert Zhou (Engineer) | Albert Zhou |
| **Approved by (name + signature).....:** | | Will Wang (Mandated Reviewer) | Will Wang |
| | | | |
| ☐ | **Testing procedure: TMP/CTF Stage 1:** | N/A | |
| **Testing location/ address.....:** | | | |
| **Tested by (name + signature).....:** | | | |
| **Approved by (name + signature).....:** | | | |
| | | | |
| ☐ | **Testing procedure: WMT/CTF Stage 2:** | N/A | |
| **Testing location/ address.....:** | | | |
| **Tested by (name + signature).....:** | | | |
| **Witnessed by (name + signature).....:** | | | |
| **Approved by (name + signature).....:** | | | |
| | | | |
| ☐ | **Testing procedure: SMT/CTF Stage 3 or 4:** | N/A | |
| **Testing location/ address.....:** | | | |
| **Tested by (name + signature).....:** | | | |
| **Witnessed by (name + signature).....:** | | | |
| **Approved by (name + signature).....:** | | | |
| **Supervised by (name + signature).....:** | | | |

| |
|---|
| **List of Attachments (including a total number of pages in each attachment):**<br>**Appendix No.1: National differences for Singapore: from page 16 to page 20, total 5 pages;**<br>**Appendix No.2: National differences for Japan: from page 21 to page 45, total 25 pages;** |
| **Summary of testing: From the result of our examination and tests in the submitted samples, conclude they comply with the requirements of the standard IEC 60950-1:2005 (Second Edition) + Am 1:2009 +Am 2:2013** |

| **Tests performed (name of test and test clause):** | **Testing location:** |
|---|---|
| 1.6.2 Input current test<br>2.1.1.5 Energy hazard test<br>4.2.7 Mechanical strength – stress relief test<br>4.5.2 Temperature test<br>5.3 Abnormal operating and fault conditions test | Intertek Testing Services Shanghai<br>Building No. 86, 1198 Qinzhou Road (North)<br>200233 Shanghai CHINA |

**Summary of compliance with National Differences:**

**The test report covers group differences for the CENELEC countries.**

**The national differences for Singapore and Japan have been checked according to IEC 60950-1 1st ed.**

**The national differences for Japan have been checked according to IEC 60950-1 2nd Ed+A1.**

**The national differences for China and Australia/New Zealand have been checked according to IEC 60950-1 2nd ed.**

**The national difference for Korea has been checked according to IEC 60950-1 2nd ed. + A1.**

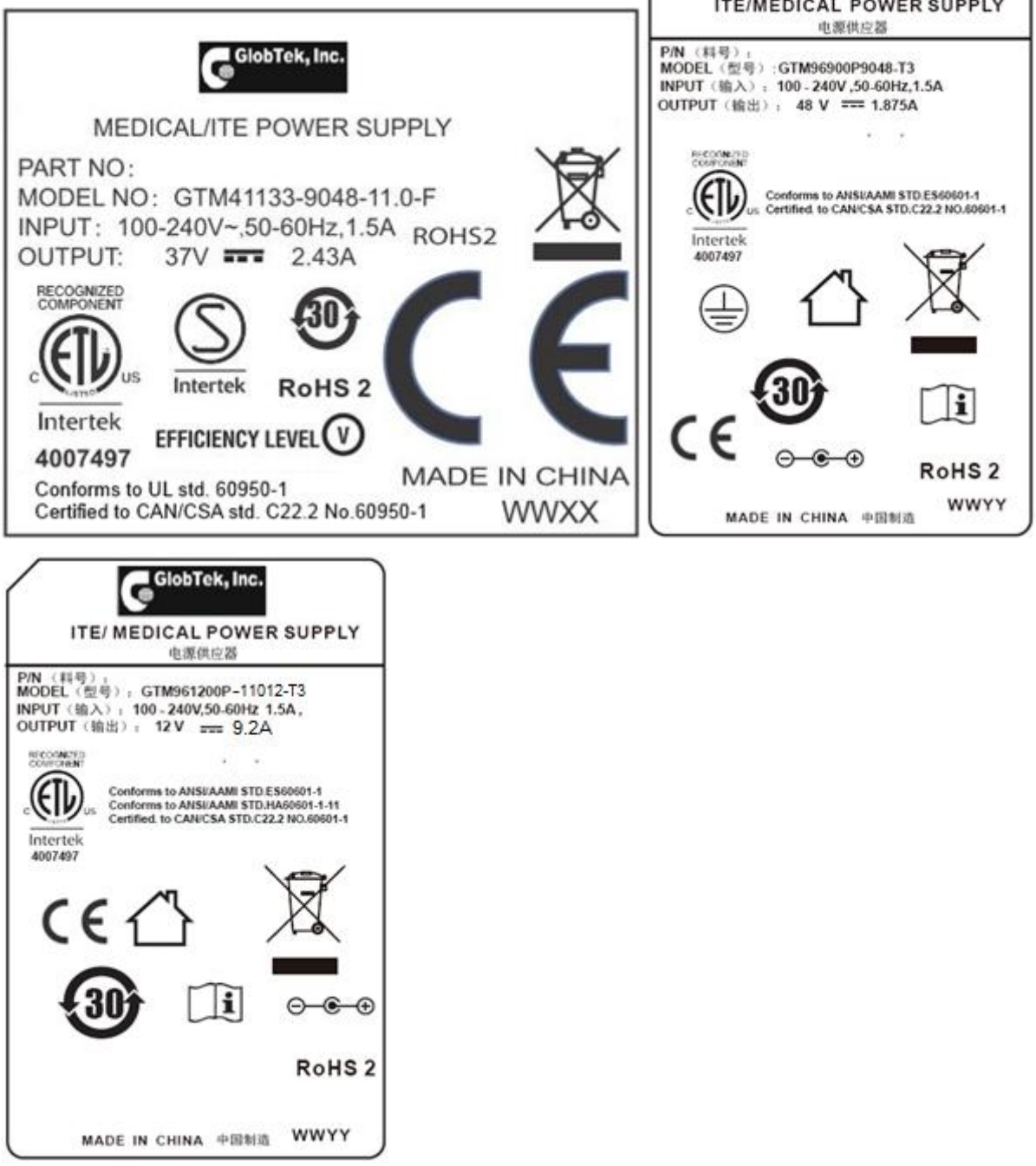
**The national differences for USA and Canada have been checked according to IEC 60950-1 2nd ed. + A1 + A2.**

☒ **The product fulfils the requirements of IEC 60950-1:2005 (Second Edition) + Am 1:2009 + Am 2:2013 and EN 60950-1: 2006 + A11: 2009 + A1: 2010 + A12: 2011 + A2:2013.**

**Copy of marking plate(representative):**

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


**For open frame model**




Note: The above markings are the minimum requirements required by the safety standard. For the final production samples, the additional markings which do not give rise to misunderstanding may be added.

Other models are with similar label as corresponding above models except different model name and output ratings.

| | |
|---|---|
| **Test item particulars.....:** | |
| **Equipment mobility.....:** | [] movable [] hand-held [X] transportable<br>[] stationary [X] for building-in [] direct plug-in |
| **Connection to the mains.....:** | [] pluggable equipment [X] type A [] type B<br>[] permanent connection<br>[X] detachable power supply cord<br>[] non-detachable power supply cord<br>[] not directly connected to the mains<br>[x] Equipment is a PSU for building-in to be evaluated in the end product. |
| **Operating condition.....:** | [X] continuous<br>[] rated operating / resting time: |
| **Access location .....:** | [X] operator accessible<br>[] restricted access location |
| **Over voltage category (OVC) .....:** | [] OVC I [X] OVC II [] OVC III [] OVC IV<br>[] other: |
| **Mains supply tolerance (%) or absolute mains supply values .....:** | +10%/-10% |
| **Tested for IT power systems .....:** | [X] Yes [] No |
| **IT testing, phase-phase voltage (V) .....:** | 120V or 230V |
| **Class of equipment .....:** | [X] Class I [X] Class II [] Class III<br>[] Not classified |
| **Considered current rating of protective device as part of the building installation (A) .....:** | 16A ( 20A for Noth America) |
| **Pollution degree (PD) .....:** | [] PD 1 [X] PD 2 [] PD 3 |
| **IP protection class .....:** | IP40 (Except open frame) |
| **Altitude during operation (m) .....:** | Max. 5000m |
| **Altitude of test laboratory (m) .....:** | <100m |
| **Mass of equipment (kg) .....:** | Approx. 0.48kg (For model: GT*41133 series)<br>Approx. 0.40kg (For model: GT*96900P series, GT*961200P series) |
| **Possible test case verdicts:** | |
| **- test case does not apply to the test object.....:** | N/A |
| **- test object does meet the requirement.....:** | P (Pass) |
| **- test object does not meet the requirement.....:** | F (Fail) |
| **Testing.....:** | |
| **Date of receipt of test item .....:** | 2017-06-13 |
| **Date (s) of performance of tests.....:** | 2017-06-13 to 2017-06-26 |

| **General remarks:** |
|---|
| The test results presented in this report relate only to the object tested.<br>This report shall not be reproduced, except in full, without the written approval of the Issuing testing laboratory.<br>"(See Enclosure #)" refers to additional information appended to the report.<br>"(See appended table)" refers to a table appended to the report.<br>**Throughout this report a ☐ comma / ☒ point is used as the decimal separator.**<br>When determining for test conclusion, measurement uncertainty of tests has been considered.<br>This report is for the exclusive use of Intertek's Client and is provided pursuant to the agreement between Intertek and its Client. Intertek's responsibility and liability are limited to the terms and conditions of the agreement. Intertek assumes no liability to any party, other than to the Client in accordance with the agreement, for any loss, expense or damage occasioned by the use of this report. Only the Client is authorized to permit copying or distribution of this report and then only in its entirety. Any use of the Intertek name or one of its marks for the sale or advertisement of the tested material, product or service must first be approved in writing by Intertek. The observations and test results in this report are relevant only to the sample tested. This report by itself does not imply that the material, product, or service is or has ever been under an Intertek certification program.<br>The test report only allows to be revised only within the report defined retention period unless standard or regulation was withdrawn or invalid. |

| **Manufacturer's Declaration per sub-clause 4.2.5 of IECEE 02:** | |
|---|---|
| The application for obtaining a CB Test Certificate includes more than one factory location and a declaration from the Manufacturer stating that the sample(s) submitted for evaluation is (are) representative of the products from each factory has been provided.....: | ☒ **Yes**<br>☐ **Not applicable** |

**When differences exist; they shall be identified in the General product information section.**

| | |
|---|---|
| **Name and address of factory (ies).....:** | **1.** GlobTek ( Suzhou) Co., Ltd<br>Building 4, No. 76 JinLing East Road, Suzhou Industrial Park, Suzhou, JiangSu, 215021, China<br>**2.** GlobTek, Inc.<br>186 Veterans Dr. Northvale, NJ 07647 USA |

**General product information:**

Product covered by this report is ITE power supply module. GT*96900P series for Limited Power Source (LPS) application.

Desktop power supplies are provided with suitable external enclosure. The top and bottom parts of the enclosure are ultrasonic welded and screws.

Open frame power supplies are without external enclosure. The external enclosure will be provided within the end product.

The products were tested to be suitable for connection to ⩽ 16 A (IEC) and ⩽ 20 A (USA) branch circuit in series. The unit is approved for TN mains star connections. The unit provides internally two fuse locations, the first fuse F1 or FS1 is required, the second fuse F2 or FS2 is optional.

The power supplies are rated class I or class II or class II units may have an optional functional earth connection. Open frame class I power supplies shall be properly bonded to the main protective bonding termination in the end product.

The other type is open-frame power supply board, which is the same as adapter model except input and output terminals and traces on the board. The installation and use for the insulation construction shall be finally determined in the end product.

All the types are designed for continuous operation.

**Model Similarity:**

GT*961200P****, GT*96900P**** and GT*41133-*****
The 1st "*" part can be 'M' or '-' or 'H' for market identification and not related to safety.
**When model = GT*41133-*****
The 2nd "*" denotes the rated output wattage designation, which can be "01" to "90", with interval of 1.
The 3rd "*" denotes the standard rated output voltage designation, which can be "16", "24", "35" and "48".
The 4th "*" part is optional, which can be "-0.1" to "-12.9" with interval of 0.1 to denote voltage deviation or blank to indicate no voltage different.
The 3rd "*" and 4th "*" together denote the output voltage, with a range of 12 - 48 volts
The 5th "*"
=-T2 means desktop class II with C8 AC inlet
=-T3A means desktop class I with C6 AC inlet
=-F means Open Frame class I
=-FW means Open Frame class II
The last * denote any six character = 0-9 or A-Z or ()[] or – or blank for marketing purposes.

**When model = GT*961200P**** and GT*96900P****
The 2nd "*" denotes the rated output wattage designation, which can be "-01" to "-120", with interval of 1 and "-" can be omitted.
The 3rd "*" denote the standard rated output voltage designation, which can be "12" to "54" or "12.0" to "54.0" in 0.1V increments
The 4th"*"
=-T2 means desktop class II with C8 AC inlet
=-T2A means desktop class II with C18 AC inlet
=-T3 means desktop class I with C14 AC inlet
=-T3TAB means desktop class I with C14 AC inlet and housing with a tab.
=-T3A means desktop class I with C6 AC inlet
The last * denote any six character = 0-9 or A-Z or ()[] or – or blank for marketing purposes

Ratings:
When model = GT*41133-*****, Input: 100-240V~, 50-60Hz, 1.5A; Output: 12-48Vdc, Max. 7.5A, Max. 90W
When model = GT*96900P****, Input: 100-240V~, 50-60Hz, 1.5A; Output: 12-54Vdc, Max. 7.5A, Max. 90W

When model = GT*961200P****, Input: 100-240V~, 50-60Hz, 1.5A; Output: 12-54Vdc, Max. **9.2A**, Max. 120W

Model list:
GT*41133-***** Desktop models and open frame models

| Model | Rated output voltage range | Max. rated output current | Max. rated output power |
|---|---|---|---|
| GTM41133-*16*-T2/T3A/F/FW* | 12-16Vdc | 7.5A | 90W |
| GTM41133-*24*-T2/T3A/F/FW* | 16.1-24Vdc | 5.6A | 90W |
| GTM41133-*35*-T2/T3A/F/FW* | 24.1-35Vdc | 3.73A | 90W |
| GTM41133-*48*-T2/T3A/F/FW* | 35.1-48Vdc | 2.56A | 90W |

GT*961200P**** and GT*96900P**** Desktop models

| Model | Output Voltage | Max. output current | Max. output power |
|---|---|---|---|
| GT*96900P**-T2/T2A/T3/T3A/T3TAB* | 12-54Vdc | 7.5A | 90W |
| **GT*961200P**-T2/T2A/T3/T3A/T3TAB*** | **12-14.9Vdc** | **9.2A** | **111W** |
| **GT*961200P**-T2/T2A/T3/T3A/T3TAB*** | **15-54Vdc** | **8A** | **120W** |

**Abbreviations used in the report:**

| | | | |
|---|---|---|---|
| - normal conditions | **N.C.** | - single fault conditions | **S.F.C** |
| - functional insulation | **FI** | - basic insulation | **BI** |
| - double insulation | **DI** | - supplementary insulation | **SI** |
| - between parts of opposite polarity | **BOP** | - reinforced insulation | **RI** |

**Indicate used abbreviations (if any)**

**Modification 1:**
**The original test report ref. No. 161200822SHA-001 dated on 2017-03-14 was modified on 2017-06-30 to include the following changes and/ or additions:**

**1. Changed the maximum output current of model series GT*961200P**** from "Max. 10A" to "Max. 9.2A".**
**2. Updated the model list for model series GT*961200P****.**
**3. Updated the national differences for Singapore and Japan.**

**After review, supplementary tests on Input current test, Energy hazard test, Mechanical strength – stress relief test, Temperature test and Abnormal operating and fault conditions test were performed with model GTM961200P11112-T3.**

**Clauses Concerned.....: Clauses 1.6.2, 2.1.5, 4.2.7, 4.5.2 and 5.3**
**National differences for Singapore**
**National differences for Japan**

| IEC 60950-1 | | | |
|---|---|---|---|
| Clause | Requirement + Test | Result - Remark | Verdict |
| 1.6.2 | Input current | (see appended table 1.6.2) | P |
| 2.1.1.5 | Energy hazards ..... : | No energy hazard in output (see appended tables 2.1.1.5) | P |
| 4.2.7 | Stress relief test | After 7h at 105°C and cooling down to room temperature, no shrinkage, distortion or loosing of enclosure parts was noticeable on the unit. | P |
| **4.5** | **Thermal requirements** | | **P** |
| 4.5.1 | General | | P |
| 4.5.2 | Temperature tests | | P |
| | Normal load condition per Annex L .....: | Rated load with continuous operation. | — |
| 4.5.3 | Temperature limits for materials | (see appended table 4.5) | P |
| 4.5.4 | Touch temperature limits | (see appended table 4.5) | P |
| **5.3** | **Abnormal operating and fault conditions** | | **P** |
| 5.3.1 | Protection against overload and abnormal operation | (see appended table 5.3) | P |
| 5.3.2 | Motors | No motor. | N/A |
| 5.3.3 | Transformers | (see appended Annex C) | P |
| 5.3.4 | Functional insulation.....: | Method a) & c). Short Circuit tests, result see appended table 5.3. | P |
| 5.3.5 | Electromechanical components | No electromechanical components. | N/A |
| 5.3.6 | Audio amplifiers in ITE .....: | No such component. | N/A |
| 5.3.7 | Simulation of faults | (see appended table 5.3) | P |
| 5.3.8 | Unattended equipment | There are no thermostats and similar components within the EUT. | N/A |
| 5.3.9 | Compliance criteria for abnormal operating and fault conditions | No fire propagated beyond the equipment, no molten metal was emitted and the enclosures no deformed. | P |
| 5.3.9.1 | During the tests | | P |
| 5.3.9.2 | After the tests | After test, the EUT still complies with relevant requirements of this standard. | P |

| IEC 60950-1 | | | |
|---|---|---|---|
| Clause | Requirement + Test | Result - Remark | Verdict |

| 1.6.2 | TABLE: Electrical data (in normal conditions) | | | | | P |
|---|---|---|---|---|---|---|
| U (V) | I (A) | Irated (A) | P (W) | Fuse # | Ifuse (A) | Condition/status |
| Model GTM961200P11112-T3 | | | | | | |
| 90Vac | 1.395 | -- | 124.1 | F1, F2 | 1.395 | Max Normal Load 50Hz |
| 90Vac | 1.380 | -- | 123.8 | F1, F2 | 1.380 | Max Normal Load 60Hz |
| 100Vac | 1.238 | 1.5 | 123.3 | F1, F2 | 1.238 | Max Normal Load 50Hz |
| 100Vac | 1.226 | 1.5 | 123.1 | F1, F2 | 1.226 | Max Normal Load 60Hz |
| 240Vac | 0.533 | 1.5 | 120.6 | F1, F2 | 0.533 | Max Normal Load 50Hz |
| 240Vac | 0.533 | 1.5 | 120.6 | F1, F2 | 0.533 | Max Normal Load 60Hz |
| 264Vac | 0.488 | -- | 120.4 | F1, F2 | 0.488 | Max Normal Load 50Hz |
| 264Vac | 0.489 | -- | 120.4 | F1, F2 | 0.489 | Max Normal Load 60Hz |
| Supplementary information: | | | | | | |

| 2.1.1.5 c) 1) | TABLE: max. V, A, VA test | P |
|---|---|---|

| Voltage (rated) (V) | Current (rated) (A) | Voltage (max.) (V) | Current (max.) (A) | VA (max.) (VA) |
|---|---|---|---|---|
| Model: GTM961200P11112-T3 | | | | |
| 12.0Vdc | 9.2 | 12.02 | 12.7 | 140.7 |
| supplementary information: | | | | |
| The above measurements are the maximum values (max. V and max. A not obtained at the same time). | | | | |

| IEC 60950-1 | | | |
|---|---|---|---|
| Clause | Requirement + Test | Result - Remark | Verdict |

| 4.5 | TABLE: Thermal requirements | | | P |
|---|---|---|---|---|
| | Supply voltage (V) ..... : | 90 | 264 | — |
| | Ambient $T_{min}$ (°C) ..... : | 40 | 40 | — |
| | Model ..... : | GTM961200P11112-T3 | | — |
| Maximum measured temperature T of part/at…...: | | T (°C) | | Allowed $T_{max}$ (°C) |
| 1.AC Inlet | | 59.3 | 54.8 | 70 |
| 2.PE wire | | 96.8 | 87.8 | 105 |
| 3.Varistor MOV1 | | 69.5 | 57.9 | 85 |
| 4.Line chock of LF1 | | 107.7 | 67.3 | 130 |
| 5.X-capacitor CX1 | | 91.6 | 73.6 | 100 |
| 6.Line chock of LF2 | | 101.6 | 80.4 | 130 |
| 7.PCB under BD1 | | 100.8 | 79.2 | 130 |
| 8.Line chock of L1 | | 106.8 | 81.6 | 130 |
| 9.Line chock of L2 | | 104.3 | 84.5 | 130 |
| 10.PCB under Q1 | | 110.3 | 88.0 | 130 |
| 11.PCB under Q3 | | 104.3 | 84.5 | 130 |
| 12.E-capacitor C4 | | 101.0 | 87.2 | 105 |
| 13.Opto coupler U2 | | 96.7 | 89.4 | 100 |
| 14.T1 coil | | 107.3 | 93.2 | 110 |
| 15.T1 core | | 107.2 | 92.3 | 110 |
| 16.Line chock of L3 | | 106.4 | 89.3 | 130 |
| 17.Y-capacitor CY1 | | 95.0 | 81.5 | 125 |
| 18.Y-capacitor CY2 | | 98.2 | 85.8 | 125 |
| 19.Line chock of L4 | | 112.2 | 94.5 | 130 |
| 20.E-capacitor C41 | | 101.3 | 92.2 | 105 |
| 21.PCB under D53 | | 110.9 | 96.9 | 130 |
| 22.Output wire | | 77.6 | 75.8 | 80 |
| 23.Plastic enclosure inside near T1 | | 95.0 | 84.4 | Ref. |
| 24.Plastic enclosure outside near T1 | | 83.4 | 82.5 | 95 |
| 25.Ambient | | 40.0 | 40.0 | -- |
| Supplementary information: | | | | |

| IEC 60950-1 | | | |
|---|---|---|---|
| Clause | Requirement + Test | Result - Remark | Verdict |

| 5.3 | TABLE: Fault condition tests | | P |
|---|---|---|---|
| | Ambient temperature (°C) ..... : | 25, if no else specified | — |
| | Power source for EUT: Manufacturer, model/type, output rating ..... : | -- | — |

| Component No. | Fault | Supply voltage (V) | Test time | Fuse # | Fuse current (A) | Observation |
|---|---|---|---|---|---|---|
| Model: GTM961200P11112-T3 | | | | | | |
| BD1 | Sc | 264 | 1s | F1,F2 | 0 | Fuse opened immediately no hazard |
| C2 | Sc | 264 | 1s | F1,F2 | 0 | Fuse opened immediately no hazard |
| Q1 pinG-S | Sc | 264 | 30min | F1,F2 | 0.525 | Unit work normally no hazard |
| Q1 pinG-D | Sc | 264 | 1s | F1,F2 | 0 | Fuse opened immediately no hazard |
| Q1 pinD-S | Sc | 264 | 1s | F1,F2 | 0 | Fuse opened immediately no hazard |
| Q2 pinG-S | Sc | 264 | 30min | F1,F2 | 0.017 | Unit shutdown immediately recoverable no hazard |
| Q2 pinG-D | Sc | 264 | 1s | F1,F2 | 0 | Fuse opened immediately no hazard |
| Q2 pinD-S | Sc | 264 | 1s | F1,F2 | 0 | Fuse opened immediately no hazard |
| Q3 pinG-S | Sc | 264 | 30min | F1,F2 | 0.021 | Unit shutdown immediately recoverable no hazard |
| Q3 pinG-D | Sc | 264 | 1s | F1,F2 | 0 | Fuse opened immediately no hazard |
| Q3 pinD-S | Sc | 264 | 1s | F1,F2 | 0 | Fuse opened immediately no hazard |
| T1 pin1-2 | Sc | 264 | 1s | F1,F2 | 0 | Fuse opened immediately no hazard |
| T1 pin5-6 | Sc | 264 | 30min | F1,F2 | 0.021 | Unit shutdown immediately recoverable no hazard |

| IEC 60950-1 | | | | | | |
|---|---|---|---|---|---|---|
| Clause | Requirement + Test | | | | Result - Remark | Verdict |

| | | | | | | |
|---|---|---|---|---|---|---|
| T1 pin 9-B | Sc | 264 | 30min | F1,F2 | 0.027 | Unit shutdown immediately recoverable no hazard |
| T1 pin A-10 | Sc | 264 | 30min | F1,F2 | 0.025 | Unit shutdown immediately recoverable no hazard |
| U1 pin3-21 | Sc | 264 | 30min | F1,F2 | 0.102 | Unit shutdown immediately recoverable no hazard |
| U1 pin3-8 | Sc | 264 | 30min | F1,F2 | 0.528 | Unit work normally ,no hazard |
| R12 | Sc | 264 | 30min | F1,F2 | 0.525 | Unit work normally ,no hazard |
| D54 | Sc | 264 | 30min | F1,F2 | 0.021 | Unit shutdown immediately recoverable no hazard |
| C41 | Sc | 264 | 30min | F1,F2 | 0.103 | Unit shutdown immediately recoverable no hazard |
| Output | Sc | 264 | 30min | F1,F2 | 0.036 | Unit shutdown immediately recoverable no hazard |
| Model: GTM961200P11112-T3 | | | | | | |
| Output (12V series) | Ol | 264 | 3h | F1,F2 | Max. 0.637A | Load to 12.65A, EUT protected immediately, no hazards. Temperature recorded: T1 winding = 117.6℃ |
| Supplementary information: “Sc” means short-circuited test, “Ol” means overload test, “Oc” means open-circuited test; “Uoc” means output voltage without load. | | | | | | |

| APPENDIX No.1: National differences for Singapore | | | — |
|---|---|---|---|
| **The safety authority's requirements stipulated in chapter 7 of the Singapore Consumer Protection Safety Requirements) Registration Scheme Information (2002 Edition, updated: 24 January 2014)** | | | |
| Item No | Requirement | Result - Remark | Verdict |
| 1 | Test certificate / Test report more than three (3) years old shall be rejected. | | P |
| 2 | The additional function must be tested to its applicable safety standard. | | P |
| 3 | All appliances must be tested to 230 VAC, 50Hz | The voltage range includes 230Vac, 50Hz | P |
| 4 | Appliance fitted with voltage selector shall be tested as follows:<br>Connect appliance to 230 VAC mains with voltage selector switch to settings not suitable for operation at 230 VAC. | No voltage selector. | N/A |
| 5 | All appliances (with tropical test requirements in applicable Standards) shall comply with the tropical condition test as stated in the relevant IEC Standards. | | P |
| 6 | All Class I appliances must be fitted with 3-pin mains plugs complied with SS 145/SS 472 that are registered with the Safety Authority. | Appliance inlet used | N/A |
| 7 | a) All Class II appliances must be fitted with 2-pin mains plug (Appendix T) complied with EN 50075.<br>b) Class II appliances that are fitted with 3-pin mains plugs must use plugs that are complied with SS 145 and registered with the Safety Authority. | Appliance inlet used and cord set will be provided during national approval | N/A |
| 8 | Electric appliance ≥ 3kW must be connected to fixed wiring. All connection to fixed wiring must be in accordance with Code of Practice CP5. | Not exceed 3kW. | N/A |
| 9 | Detachable power cord set must be listed in the test report critical component list. | Appliance inlet used | N/A |
| 10 | Circuit diagrams must be indicated with component's values for products tested to IEC 60065 and IEC 60950-1. | | P |
| 11 | Circuit diagrams of the electronic modules in the electrical appliances must be provided. | | P |
| 12 | Controlled goods, having an enclosure, which is shaped and decorated so that it is likely to be treated as a toy by children, shall not be accepted for certification and registration. | The shape and function are not considered for toy. | N/A |

| Item No | Requirement | Result - Remark | Verdict |
|---|---|---|---|
| 13 | Controlled goods with rated voltage that are not suitable for local supply voltage:<br>a) Controlled goods with rated voltage that are not suitable for local supply voltage will not be allowed for registration unless they are supplied with step-down isolating transformer and are tested together with the transformer as a complete set.<br>b) A test to ensure that the controlled goods shutdown/fail safely should the consumer accidentally plugs the product directly into the 230 V mains supply socket outlet without using the isolating stepdown transformer shall be conducted. | | N/A |
| 14 | Reboil switch<br>No part of the reboil switch is allowed to protrude into the water pot, even if it is located above the maximum water level mark. | | N/A |
| 15 | 3-pin AC adaptor (Appendix U)<br>Test report showing that the 3-pin complied with subclauses 12.1 & 12.3 of SS 246 must be submitted. | Appliance inlet used | N/A |
| 16 | 2-pin AC adaptor (Appendix U)<br>The 2-pin (Appendix T) shall comply with EN 50075. | Appliance inlet used | N/A |
| 17 | Detachable power supply cord set not supplied by Registered Supplier:<br>a) Registered Supplier who is not supplying the detachable power supply cord set together with the AC Adaptor must provide written instruction to its customer on the type of approved detachable power cord set to use and declare to Conformity Assessment Body when applying for Certificate of Conformity.<br>b) This requirement is only applicable to Register Supplier whose core business is supplying AC Adaptor or its Registered Supplier name is affiliated with the AC Adaptor's manufacturer. | No such cord set was used | N/A |
| 18 | AC Adaptor incorporated with 13A socket-outlet:<br>Additional tests clauses to 13, 17 and 18 of SS 246 would be required. | No such socket-outlet was used. | N/A |
| 19 | CD/DVD ROM (used in personal computer):<br>Test certificate showing that CD/DVD ROM has complied with IEC 60825-1 must be provided. | No such CD/DVD ROM was used. | N/A |
| 20 | Modem Card (used in personal computer):<br>Modem card incorporated in the personal computer must be tested at set level (sub-clauses 5.1 & 6 of IEC 60950) or at component level. | No such Modem Card was used. | N/A |
| 21 | Powerline Ethernet Adaptor incorporated with 13A socket-outlet:<br>Additional tests to clauses 13, 17 and 18 of SS 246 would be required. | Not such type adaptor | N/A |
| 22 | Ceiling fan and cycle fan:<br>a) These appliances must be tested to sub-clauses 5.7 and 5.8 of SS 360: 1992.<br>b) Installation instruction must mention the 3 expansion bolts for fastening the main suspension, safety cord, expansion bolt with hook for fastening safety cord and mounting plate. (Appendix Q)<br>c) Drawing (Appendix P) to show that the wires within the motor shaft are not stressed must be provided for ceiling fan only. | | N/A |

| Item No | Requirement | Result - Remark | Verdict |
|---|---|---|---|
| 23 | Decorative ceiling fan:<br>Decorative ceiling fan submitted to Conformity Assessment Body (CAB) for certification shall subject to conformity check. CAB shall request a new sample and check the identical safety components are listed in the test report of IEC 60335-2-80. The check also covers the minimum dimension requirements and availability of the safety cord indicated in the test report of subclauses 5.7 & 5.8 of SS 360. | | N/A |
| 24 | Portable/wall socket-outlet and portable cable reel:<br>a) If residual current device (RCD) is incorporated, its tripping current must be less than 30mA and operating time must be less than 0.1 second and testing to subclauses 9.9.2.1, 9.9.2.2, 9.9.2.3 and 9.16 of SS 97: Part 1: 2000 are required.<br>b) The shutters screening the current-carrying socket contacts shall not be opened by the insertion of any corresponding **SINGLE** pin of the plug into any currentcarrying socket aperture. | | N/A |
| 25 | Wall switched socketoutlet (2 x single socketoutlet):<br>Single socket-outlet with 2-gang faceplate/frame must be fulfilled with the test requirements as 2-gang socketoutlet. | | N/A |
| 26 | Remote controlled wall socket-outlet:<br>Remote controlled wall socket-outlet shall not be allowed for registration. | | N/A |
| 27 | Roaster:<br>A metal ring (Appendix V) must be provided to prevent the roaster from falling off in case of the glass bowl shattered.<br>If supplier has other method, approval would be required from the Safety Authority.<br>Note: This requirement is not applicable to roaster that is provided with metal bowl. | | N/A |
| 28 | Test pressure of town gas for gas appliances:<br>All gas appliances must be tested to 20 mbar for town gas. | | N/A |
| 29 | Specifications of LPG and Town Gas:<br>All gas appliances must be tested to the specifications stated on Appendix W. | | N/A |
| 30 | Gas appliances tested to EN 30-1-1: 1998/2008:<br>Testing to sub-clause 6.1.6 (Temperature of the LPG cylinder and its compartment) and sub-clause 6.2.1 (Ignition, cross-lighting and flame stability) must be carried out. | | N/A |
| 31 | Flame failure device (FFD) incorporated in gas appliances:<br>a) Test report/certificate showing that the FFD complied with EN 126:1995 or EN 125: 1991 for gas appliance tested to EN 30-1-1 or AG 204: 1984 for gas appliance tested to AG 101 at component level must be provided.<br>b) Testing to sub-clause 6.1.3 of EN 30-1-1 or subclause 3.6.13 of AG 101 at set level must be carried out. | | N/A |
| 32 | Gas oven:<br>It is compulsory for all gas ovens to be fitted with flame failure device. | | N/A |

| Item No | Requirement | Result - Remark | Verdict |
|---|---|---|---|
| 33 | Toughened glass gas hob:<br>a) A brochure, entitled 'Toughened Glass – A Shattering Experience?' must be included for each toughened glass gas hob put up for sale. (Order for the brochure can be placed with the Safety Authority)<br>b) Toughened glass gas hob tested to EN 30-1-1 would require any of the following testing and compliance:<br>sub-clauses 2.1.15, 2.1.16, 2.1.18, 2.10.9.5, 2.11.2.2 & 5.7.5 of AG101: 1998 / AS 4551: 1998<br>sub-clauses 2.1.16(a), 2.1.17, 2.1.19, 2.10.9(e), 2.11.2.2 & 5.7.5 of AG101: 2000 / AS 4551: 2000<br>sub-clauses 2.1.16(a), 2.1.17, 2.1.19, 2.10.8.3(e), 2.11.3(g) & 5.8.4 of AS 4551: 2008 | | N/A |
| 34 | Gasket for elbow joint of gas cooker:<br>Installation instruction must mention about the fixing of gasket for the elbow joint, if applicable. (Appendix R) | | N/A |
| 35 | Glass-ceramic gas hob with enclosed covered burner (simulated gas explosion test):<br>The gas hob must be subject to 'simulated gas explosion' test. The hob is filled with an explosive mixture of gas and detonated with a source of ignition. | | N/A |
| 36 | Material of gas hob cook top:<br>Different material requires separate certification and registration. Eg. stainless steel, enamel, stone, toughened-glass, ceramic-glass | | N/A |
| 37 | Renewal of registration for gas cookers:<br>Application for renewal of registration of gas cookers shall be supported with a valid new test report that is issued within 3 years when submitting to Conformity Assessment Body for re-certification before registration. | | N/A |
| 38 | Registration of RCCB is limited to those with 30 mA sensitivity and the operating time must be less than 0.1 second. Electronic RCCB will not be accepted for registration. | | N/A |
| 39 | Instantaneous electric water heater and mains pressure electric storage water heater:<br>a) Heating elements used must not be of the 'bareelement' type.<br>b) Registered Supplier must declare that the water heater is not using bare heating element when applying Certificate of Conformity with Conformity Assessment Body. | | N/A |
| 40 | Water heater incorporated with residual current device(RCD):<br>Testing to sub-clauses 9.9.2.1, 9.9.2.2, 9.9.2.3 and 9.16 of SS 97: Part 1: 2000 are required. | | N/A |

| Item No | Requirement | Result - Remark | Verdict |
|---|---|---|---|
| 41 | Multi-way adaptor with 3-pin socket-outlets or combination of 3-pin and 2- pin socket-outlets:<br>a) The socket contacts of the adaptor shall only accept 13A 3-pin mains plug complying with SS 145 and/or 2.5A 2-pin mains plug complying with EN 50075.<br>b) The shutters screening the current-carrying socket contacts shall not be opened by the insertion of any corresponding **SINGLE** pin of the plug into any currentcarrying socket aperture.<br>c) A barrier or other acceptable means shall be provided on the engagement surface of the 2.5A 2-pin socket-outlet of the adaptor to PREVENT entry of any types of 2-pin mains plugs except those complying with EN 50075. **(note: shutters cannot be regarded as barriers**)<br>d) Adaptor incorporates with switch would require additional test to sub-clauses 13.11, 17.1.3 and 18.1.3 of SS 145: Part 2: 1997. | Not such type adaptor | N/A |
| 42 | Plasma/LCD display monitor with TV tuner:<br>Plasma/LCD display monitor tested to IEC 60950 would require additional test to clauses 9 (related to antenna only), 10.1, 10.2, 10.3 and 12.5 of IEC 60065. | Not Plasma/LCD display monitor with TV tuner | N/A |
| 43 | Child appealing table lamp/standing lamp:<br>Child appealing table/standing lamp will not be allowed for registration unless it is powered by an AC Adaptor.<br>Only the AC Adaptor would need registration. | | N/A |
| 44 | Hot/warm & cold water dispenser:<br>Hot/warm water dispenser which has below boiling temperature shall be tested to IEC 60335-2-21. Testing to IEC 60335-2-24 shall be required if the water dispenser is incorporated with compressor for dispensing cold water. | | N/A |

Appendix No.2: National differences for Japan

| Clause | Requirement + Test | Result - Remark | Verdict |
|---|---|---|---|
| **J 60950-1(H27) TEST REPORT**<br>(Deviations from IEC 60950-1:2005, second edition + Amendment 1:2009)<br>Electrical Appliances and Materials Safety Act Article 8, 9 and Appendix 12. | | | |
| 1.2.4.1 | Add the following new notes.<br><br>Note: Even if the equipment is designed as Class I, the equipment is regarded as Class 0I equipment when 2-pin adaptor with earthing lead wire or cord set having 2-pin plug with earthing lead wire is provided or recommended. | | N/A |
| 1.2.4.3A | Add the following new clause.<br><br>1.2.4.3A CLASS 0I EQUIPMENT<br>Equipment having attachment plug without earthing blade, where protection against electric shock is achieved by:<br>- using BASIC INSULATION, and<br>- providing either of the following a) or b) in order to connect those conductive parts that might assume a HAZARDOUS VOLTAGES in the event of BASIC INSULATION fault to the PROTECTIVE EARTHING CONDUCTOR in the building wiring.<br>a) Provision of 2-pin plug with earthing lead including the condition of that 2-pin adaptor with earthing lead wire is provided or recommended.<br>b) Provision of an independent earthing terminal, when 2-core mains cord (without earthing conductor) is used.<br>Note – Class 0I equipment may have a part constructed with Double Insulation or Reinforced Insulation. | | N/A |
| 1.3.2 | Add the following notes after first paragraph:<br><br>Note 1 Transportable or similar equipment that are relocated frequently for intended usage should not be designed as Class I or Class 0I equipment unless it is intended to be installed by service personnel.<br><br>Note 2 Considering wiring circumstance in Japan, equipment intended to be installed where the provision for earthing connection is unlikely should not be designed as Class I or Class 0I equipment unless it is intended to be installed by service personnel. | | N/A |

Appendix No.2: National differences for Japan

| Clause | Requirement + Test | Result - Remark | Verdict |
|---|---|---|---|
| 1.5.1 | Replace the first paragraph with the follows:<br><br>Where safety is involved, components shall comply either with the requirements of this standard, with the safety aspects of the relevant JIS component standard, or IEC component standards in case there is no applicable JIS component standard is available. However, a component that falls within the scope of METI Ministerial ordinance No. 85 is properly used in accordance with its marked ratings, requirements of 1.5.4, 2.8.7 and 3.2.5 apply, and in addition, a cord connector of power supply cord set mating with appliance inlet complying with the standard sheet of IEC 60320-1 or JIS C 8283-1, shall comply with relevant standard sheet of IEC 60320-1 or JIS C 8283-1.<br>Replace Note 1 with the following:<br>Note 1 JIS or an IEC component standard is considered relevant only if the component in question clearly falls within its scope. | | P |
| 1.5.2 | Replace the first sentence in the first dashed paragraph with the following:<br>- a component that has been demonstrated to comply with a JIS component standard harmonized with the relevant IEC component standard, or where such JIS component standard is not available, a component that has been demonstrated to comply with the relevant IEC component standard shall be checked for correct application and use in accordance with its rating.<br>Replace the first sentence in the third dashed paragraph as follows:<br>- where no relevant IEC component standard or JIS component standard harmonized with the relevant IEC component standard exists, or where components are used in circuits not in accordance with their specified rating, the components shall be tested under the conditions occurring in the equipment.<br>Add the following Note 2 after the third dashed paragraph as follows:<br>Note 2 See 1.7.5A when Type C.14 appliance coupler rated 10 A per JIS C 8283-1 is used with an equipment rated not more than 125 V and rated more than 10 A. | | P |

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| Clause | Requirement + Test | Result - Remark | Verdict |
|---|---|---|---|
| 1.5.9.1 | Add the following in the last of NOTE 1.<br><br>Gas discharge tube connected in series with VDR may be used. | | N/A |
| 1.5.9.4 | Add following paragraph after the NOTE:<br><br>Gas discharge tube that complies with the requirements of functional insulation may be connected in series with VDR for bridging basic insulation. | | N/A |
| 1.7.1.1 | Replace the last paragraph with the following:<br><br>Where symbols are used, they shall conform to JIS S 0101, ISO 7000 or IEC 60417 where appropriate symbols exist. | | P |
| 1.7.1.2 | Replace first and second dashed paragraphs with the followings:<br><br>- manufacturer’s or responsible company’s name or trade-mark or identification mark;<br><br>- manufacturer's or responsible company’s model identification or type reference; | | P |
| 1.7.2.1 | Add the following after 2nd paragraph.<br><br>Instruction or equipment marking regarding safety shall be written in Japanese unless otherwise permitted in this standard. | | N/A |
| 1.7.2.5 | Replace the last sentence with the following:<br><br>An acceptable marking for an electric shock hazard is  (6.2.4 of JIS S 0101). | | N/A |
| 1.7.5 | Replace 2nd paragraph with the following.<br><br>Socket-outlets conforming to JISC8303 are examples of standard power supply outlets. | | N/A |

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| Clause | Requirement + Test | Result - Remark | Verdict |
|---|---|---|---|
| 1.7.5A | Add the following new clause. after 1.7.5<br><br>1.7.5A Appliance Coupler<br>If appliance coupler according to IEC60320-1, C.14(rated current: 10A) is used in equipment whose rated voltage is less than 125V and rated current is over 10A, the following instruction or equivalent shall be described in the user instruction.<br>“ Use only designated cord set attached in this equipment”<br><br>*Example in Japanese:*<br>“この機器に同こん(梱)した指定の電源コードセ<br><br>If appliance coupler is used for connection to the mains and if the cord set is not provided within the package for the equipment, suitable information regarding to the cord set shall be described in the user instruction<br><br>*Note Since the combination of appliance inlet with earthing pin and two-core cord set(without earthing conductor) is special, the cord set should be attached in the equipment and the use instruction should provide the information that the cord set is exclusively used with the equipment and not allowed to use with other equipments.* | | N/A |

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| Clause | Requirement + Test | Result - Remark | Verdict |
|---|---|---|---|
| 1.7.14A | Add the following new clause. after 1.7.14<br><br>1.7.14A Marking for CLASS 0I EQUIPMENT<br>For CLASS 0I EQUIPMENT, the following or equivalent instructions shall be marked.<br><br>- the following instruction shall be marked on the mains plug or on the visible place of the main body<br><br>“Provide an earthing connection”<br><br>*Example in Japanese:*<br>”必ず接地接続を行ってください。”<br><br>- the following marking shall be marked on the visible place of the main body or written in the operating instructions:<br><br>“Provide an earthing connection before the mains plug is connected to the mains. And, when disconnecting the earthing connection, be sure to disconnect after pulling out the mains plug from the mains.”<br><br>*Example in Japanese:*<br>接地接続は必ず，電源プラグを電源につなぐ前<br>また，接地接続を外す場合は，必ず電源プラグ | | N/A |
| 1.7.14B | Add the following new clause after 1.7.14A<br><br>1.7.14B Protective earthing conductor used for CLASS 0I equipment<br><br>For CLASS 0I equipment provided with independent main protective earthing terminal, where the cord for the protective earthing connection is not provided within the package for the equipment, the suitable information for the protective earthing connection shall be provided in the instruction manual. (See 2.6.3.2) | | N/A |

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| Clause | Requirement + Test | Result - Remark | Verdict |
|---|---|---|---|
| 2.1.1.1 | Replace item b) of 2.1.1.1with the following.<br><br>b) A test with the test finger, Figure 2A, which shall not contact parts described above when applied to openings in the ENCLOSURES after removal of parts that can be detached by an OPERATOR, including fuseholders, and with OPERATOR access doors and covers open. It is permitted to leave lamps in place for this test. Connectors that can be separated by an OPERATOR, other than those complying with JIS C 8303 or Appendix 4 of the interpretation of Ministerial Ordinance on stipulating technical requirements for the Electrical Appliance or JIS C 8285 or IEC 60309 series or JIS C 8283 series or IEC 60320 series, shall also be tested during disconnection. | | N/A |
| 2.5 | Replacement:<br>“IEC 60730-1” replaced with “JIS C 9730-1”. | | N/A |
| 2.6.3.2 | Add the following after 1st paragraph.<br><br>However where the single core conductor is used for protective earthing lead or earthing cord for CLASS 0I equipment, either of the following condition shall be met.<br><br>- Use of annealed copper wire with1 .6mm diameter or corrosion-inhibiting metal wire equivalent or higher in term of strength and thickness.<br>- Single core cord or single core cabtire cable with 1.25mm$^2$ or more cross-sectional area | | N/A |
| 2.6.3.5 | Add the following after 1st paragraph.<br><br>However this requirement does not apply to internal conductor of the cord set that is covered by the sheath of mains cord and is the formed together with mains plug and appliance connector. | | N/A |

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| Clause | Requirement + Test | Result - Remark | Verdict |
|---|---|---|---|
| 2.6.4.2 | Replace 1st paragraph with the following.<br><br>Equipment required to have protective earthing shall have a main protective earthing terminal. For equipment with a DETACHABLE POWER SUPPLY CORD, the earthing terminal in the appliance inlet is regarded as the main protective earthing terminal. However, for CLASS 0I EQUIPMENT provided with the separate main protective earthing terminal other than appliance inlet, the separate main protective earthing terminal may be treated as mains protective earthing terminal. | | N/A |
| 2.6.5.4 | Replace 1st sentence with the following.<br><br>Protective earthing connections of CLASS I EQUIPMENT shall make earlier and break later than the supply connections in each of the following: | | P |
| 2.6.5.8A | Add the following new clause. after 2.6.5.8<br><br>2.6.5.8A Earthing of CLASS 0I EQUIPMENT<br>Plugs with a lead wire for earthing shall not be used for equipment having a rated voltage exceeding 150V.<br>For plugs with a lead wire for earthing, the lead wire shall not be earthed by a clip.<br>CLASS 0I EQUIPMENT shall be provided with an earthing terminal or lead wire for earthing in the external location where easily visible. | | N/A |
| 2.7.6 | Replace “ISO 3864, No. 5036” with “6.2.4 of JIS S 0101”. | | N/A |
| 2.9.3<br>Table 2H | Replace the following columns in Table 2H.<br><br>The right column for BASIC, TNV-2, -earthed TNV-1 circuit is replaced with “B13 [d), f)]”<br><br>The right column for SUPPLEMENTARY, TNV CIRCUIT, -basic-insulated conductive part earthed circuit is replaced with “S2” | | N/A |
| 2.10.3.1 | Replace 8th paragraph with the following<br><br>The above minimum CREEPAGE DISTANCES for connectors do not apply to connectors that comply with JIS C 8285, IEC60309 series, JIS C 8283 series, IEC60320 series, JIS C 8303, and Appendix 4 of the interpretation of Ministerial Ordinance on stipulating technical requirements for the Electrical Appliance in which dimension is comply with JIS C 8283 series, JIS C 8303 or IEC 60309-2. | | N/A |

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| Clause | Requirement + Test | Result - Remark | Verdict |
|---|---|---|---|
| 2.10.4.3 | Replace 6th paragraph with the following<br><br>The above minimum CREEPAGE DISTANCE for connectors do not apply to connectors that comply with JIS C 8285, IEC60309 series, JIS C 8283 series, IEC60320 series, JIS C 8303, and Appendix 4 of the interpretation of Ministerial Ordinance on stipulating technical requirements for the Electrical Appliance in which dimension is comply with JIS C 8283 series, JIS C 8303 or IEC 60309-2. | | P |
| 2.10.9 | Replace “1.4.5” in 3rd paragraph with “1.4.12”. | | N/A |
| 3.2.3 | Add the following after 3rd paragraph.<br><br>Table 3A applies when cables complying JIS C 3662 or JIS C 3663 are used. In case of other cables, cable entries shall be so designed that a conduit suitable for the cable used can be fitted. | | N/A |
| 3.2.4 | Add the following as fourth dash.<br>- be so constructed that mechanical stress shall not transmit to the soldering part of inlet terminal during insertion or removal of the connector except that the body of the inlet is secured and is secured not only soldering. | | P |

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| Clause | Requirement + Test | Result - Remark | Verdict |
|---|---|---|---|
| 3.2.5.1 | Add the following to the last of first dashed paragraph.<br>Or mains cords shall be of the sheathed type complying with Appendix 1 of the interpretation of Ministerial Ordinance on stipulating technical requirements for the Electrical Appliance.<br><br>Add the following to the last of second dashed paragraph.<br>Or mains cords shall be of the sheathed type complying with Appendix 1 of the interpretation of Ministerial Ordinance on stipulating technical requirements for the Electrical Appliance.<br><br>Replace 3rd dashed paragraph with the following.<br><br>− include, for equipment required to have protective earthing, a PROTECTIVE EARTHING CONDUCTOR having green-and-yellow insulation. However this requirement does not apply to internal conductor of the cord set that is covered by the sheath of mains cord and is the formed together with mains plug and appliance connector. For CLASS 0I EQUIPMENT provided with the separate main protective earthing terminal, the protective conductor may not need to provide in mains cord. ; and<br><br>Replace 4th dashed paragraph with the following.<br><br>− The cord complying with JIS C 3662-5 or JIS C 3663-4 has conductors with cross-sectional areas not less than those specified in Table 3B. Other cord shall comply with relevant wiring regulation. | | N/A |
| 3.3.4<br>Table 3D | Add the following note to Table 3D:<br><br>Note For cables other than those complying with JIS C 3662 or JIS C 3663, terminals shall be suitable for the size of the intended cables. | | N/A |
| 3.3.7 | Add the following after the first sentence:<br><br>This requirement is not applicable to the external earthing terminal of Class 0I equipment. | | N/A |

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| Clause | Requirement + Test | Result - Remark | Verdict |
|---|---|---|---|
| 4.3.4 | Add the following after the first sentence:<br><br>This requirement also applies to those connections in Class 0I equipment, where CLEARANCE or CREEPAGE DISTANCES over BASIC INSULATION would be reduced to less than the values specified in 2.10. | | N/A |
| 4.3.5 | Replace 1st dashed paragraph with the following.<br><br>Within a manufacturer's unit or system, plugs and sockets likely to be used by the OPERATOR or by a SERVICE PERSON shall not be employed in a manner likely to create a hazard due to misconnection. In particular, connectors complying with IEC 60320/JIS C 8283 series or JIS C 8303 or JIS C 8358 shall not be used for SELV CIRCUITS or TNV CIRCUITS. Keying, location or, in the case of connectors accessible only to a SERVICE PERSON, clear markings are permitted to meet the requirement. | | N/A |
| 4.4.2 | Replace the paragraph with the following:<br><br>HOUSEHOLD AND HOME/OFFICE DOCUMENT/MEDIA SHREDDERS shall also comply with Annex JA. | | N/A |
| 4.5.3 | Add the following note to footnote b) of Table 4B:<br><br>NOTE: In case no data for the material is available, Appendix 4, 4. (1). b. 3 of the Interpretation on the Ministerial Ordinance stipulating Technical Specifications for Electrical Appliances (Commerce and Distribution Policy Group No. 3:2008/04/19) may apply. | | N/A |
| 5.1.3 | Add a note after the first paragraph as follows:<br><br>Note – Attention should be drawn to that majority of three-phase power system in Japan is of delta connection, and therefore, in that case, test is conducted using the test circuit from IEC 60990, figure 13. | | N/A |

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| Clause | Requirement + Test | Result - Remark | Verdict |
|---|---|---|---|
| 5.1.6 | Replace Table 5A. as follows | | P |

| Type of equipment | Terminal A of measuring instrument connected to: | Maximum TOUCH CURRENT mA r.m.s. [a] | Maximum PROTECTIVE CONDUCTOR CURRENT |
|---|---|---|---|
| ALL equipment | Accessible parts and circuits not connected to protective earth [b] | 0,25 | - |
| HAND-HELD | Main protective earthing terminal of CLASS I EQUIPMENT | 0,75 | - |
| | Main protective earthing terminal of CLASS 0 I EQUIPMENT | 0,5 | - |
| MOVABLE (other than HAND_HELD, but including TRANSPORTABLE EQUIPMENT) | Main protective earthing terminal of CLASS I EQUIPMENT | 3,5 | - |
| | Main protective earthing terminal of CLASS 0 I EQUIPMENT | 1.0 | - |
| STATIONARY, PLUGGABLE TYPE A | Main protective earthing terminal of CLASS I EQUIPMENT | 3,5 | - |
| | Main protective earthing terminal of CLASS 0 I EQUIPMENT | 1,0 | - |
| ALL other STATIONARY EQUIPMENT<br>- not subject to the conditions of 5.1.7<br>- subject to the conditions of 5.1.7 | Main protective earthing terminal of CLASS I EQUIPMENT | 3.5<br>- | -<br>5 % of input current |
| | Main protective earthing terminal of CLASS 0 I EQUIPMENT | 1.0<br>- | -<br>- |

a If peak values of TOUCH CURRENT are measured, the maximum values are obtained by multiplying the r.m.s.values in the table by 1,414.
b Some unearthed accessible parts are covered in 1.5.6 and 1.5.7 and the requirements of 2.4 apply. These may be different from those in 5.1.6.

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| Clause | Requirement + Test | Result - Remark | Verdict |
|---|---|---|---|
| Annex G | Replace the paragraph before Table G.2 with the following<br><br>The above minimum CREEPAGE DISTANCES for connectors do not apply to connectors that comply with JIS C 8285, IEC60309 series, JIS C 8283 series, IEC60320 series, JIS C 8303, and Appendix 4 of the interpretation of Ministerial Ordinance on stipulating technical requirements for the Electrical Appliance in which dimension is comply with JIS C 8283 series, JIS C 8303 or IEC 60309-2. | | N/A |
| Annex P | Delete the issued date of IEC61051-2. | | P |
| Annex Q | Replace the terms in b) as follows:<br><br>From “Maximum continuous voltage” to “Maximum continuously applied voltage”<br>From “The maximum continuous a.c. voltage” to “The maximum continuously applied a.c. voltage” | | P |
| Annex U U.2.4 | Add the following new note after NOTE:<br><br>NOTE 2 Considering environmental issue, "(for example 1,1,1 -trichloroethane)" was deleted from the above paragraph. | | P |
| Annex V V.1 | Replace “3.1.2”in the first line of V.1 with “312” in first line. | | P |
| Annex W W.1 | Replace third sentence in the first paragraph with the following:<br><br>Floating circuits can exist in CLASS I EQUIPMENT, CLASS 0I EQUIPMENT and earthed circuits can exist in CLASS II EQUIPMENT. | | N/A |
| Annex CC CC.2 | Replace second dashed paragraph with the following:<br>- 10 000 cycles of turning enable on and off with a ferrite-core inductor having<br>(0.35 ± 0.1) mH inductance at 1 kHz and a d.c. resistance not exceeding 1 Ω connected in the output circuit;<br><br>Replace fifth dashed paragraph with the following:<br>− 10 000 cycles of turning the input pin on and off with a ferrite-core inductor having<br>(0.35 ± 0.1) mH inductance at 1 kHz and a d.c. resistance not exceeding 1Ω connected to the input supply and return while keeping enable active and shorting the output; | | N/A |

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| Clause | Requirement + Test | Result - Remark | Verdict |
|---|---|---|---|
| CC.3 | Add note at end of CC.3:<br>Note: The fast blow fuse should be the one complying with IEC 60127-2. | | N/A |
| Annex EE | Replace Annex EE with the following Annex JA. | | N/A |
| | Annex JA<br>(normative)<br>Document shredding machines<br><br>HOUSEHOLD AND HOME/OFFICE DOCUMENT/MEDIA SHREDDERS shall additionally comply with the requirements of this annex.<br><br>**JA.1 Markings and instructions**<br><br>The symbol  (JIS S 0101:2000, 6.2.1) and the following precautions for use shall be marked on readily visible part adjacent to document feed opening. The marking shall be clearly legible, permanent, and easily discernible;<br>- that use by an infants/children may cause a hazard of injury etc.;<br>- that a hand can be drawn into the mechanical section for shredding when touching the document-slot;<br>- that clothing can be drawn into the mechanical section for shredding when touching the document-slot;<br>- that hairs can be drawn into the mechanical section for shredding when touching the document-slot;<br>- in case of equipment incorporating a commutator motor, that equipment may catch fire or explode by spraying of flammable gas.<br><br>**JA.2 Inadvertent reactivation**<br>Any safety interlock that can be operated by means of the test finger, Figure JA.1, is considered to be likely to cause inadvertent reactivation of the hazard.<br><br>Compliance is checked by inspection and, where necessary, by a test with the test finger, Figure JA.1.<br><br>**JA.3 Disconnection from the mains supply**<br>Document shredding machines shall incorporate an isolating switch complying with sub-clause 3.4.2 as the device disconnecting the power of hazardous moving parts. For this switch, two-position (single-use) switch or multi-position (multifunction) switch (e.g., slide switch) may be used.<br>If two-position switch, the positions for “ON” and “OFF” shall be indicated in accordance with sub-clause 1.7.8. If multi-position switch, the position for “OFF” shall be indicated in accordance with sub-clause 1.7.8 and other positions shall be indicated with proper terms or symbols.<br><br>Compliance is checked by inspection.<br><br>**JA.4 Protection against hazardous moving parts**<br>Any warning shall not be used instead of the structure for preventing access to hazardous moving parts.<br>Document shredding machines shall comply with the following requirements. | | |

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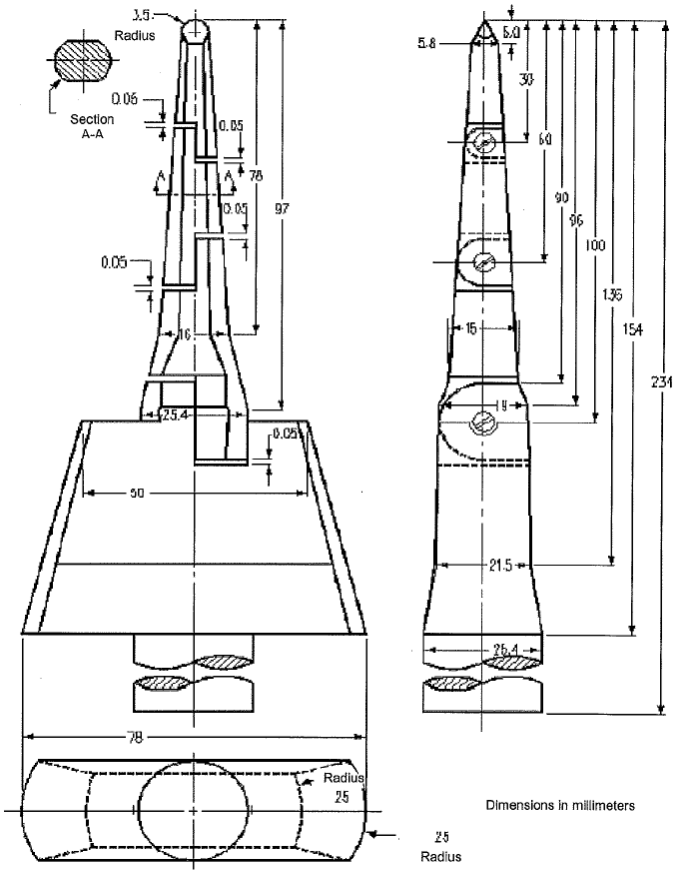
| Clause | Requirement + Test | Result - Remark | Verdict |
|---|---|---|---|
| | Insert the test finger, Figure JA.1, into all openings in MECHANICAL ENCLOSURES without applying appreciable force. It shall not be possible to touch hazardous moving parts with the test finger. This consideration applies to all sides of MECHANICAL ENCLOSURES when the equipment is mounted as intended. Before testing with the test finger, remove the parts detachable without a tool.<br><br>Insert the wedge-probe, Figure JA.2, into the document-slot. And, against all directions of openings, if straight-cutting type, a force of 45 N shall apply to the probe, and 90 N if cross-cutting type. In this case, the weight of the probe is to be factored into the overall applied force. Before testing with the wedge-probe, remove the parts detachable without a tool. It shall not be possible to touch any hazardous moving parts, including the shredding roller or the mechanical section for shedding, with the probe.<br><br>  <br><br>**Figure JA.1 Test finger** | N/A |

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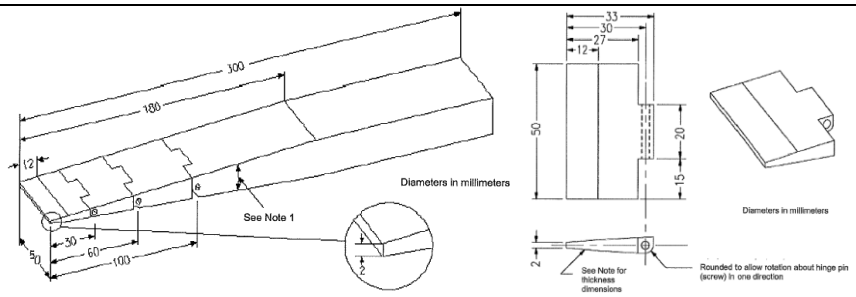
| Clause | Requirement + Test | Result - Remark | Verdict |
|---|---|---|---|




**(Details of the tip of wedge)**

| Distance from the tip (mm) | Thickness of probe (mm) |
|---|---|
| 0 | 2 |
| 12 | 4 |
| 180 | 24 |

Note 1 - The thickness of the probe varies linearly, with slope changes at the respective points shown in the table.
Note 2 –The allowable dimensional tolerance of the probe is +/- 0.127 mm.

**Figure JA.2 Wedge-probe**