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| TEST REPORT IEC 60065 EN 60065 Audio, video and similar electronic apparatus – Safety requirements | |
| Report Number | S40585-00-00TJ |
| Date of issue | 2016-06-24 |
| Total number of pages | 29 |
| Name of Testing Laboratory preparing the Report..... | CSA Group Bayern GmbH |
| Applicant's name..... | Modrow audio engineering |
| Address | Modrow Lohrbergweg 8 14169 Berlin Germany |
| Test specification: | |
| Standard | IEC 60065:2014 (Eight Edition) EN 60065:2014 |
| Test procedure | Compliance Test |
| Non-standard test method | N/A |
| Test Report Form No..... | IEC60065L |
| Test Report Form(s) Originator | Intertek Semko AB |
| Master TRF | Dated 2014-08 |
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| The test report merely corresponds to the test sample. It is not permitted to copy extracts of these test results without the written permission of the test laboratory. | |

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| Test item description : | System power supply | |
| Trade Mark : | modrow audio engineering | |
| Manufacturer | modrow audio engineering | |
| Model/Type reference | ECO-PS 14 VA | |
| Ratings | Input: ~220-240 V AC – 50/60Hz Output: 2x 20 V DC / 300 mA 1x 3.3 V DC / 10 mA | |
| Responsible Testing Laboratory (as applicable), testing procedure and testing location(s): | | |
| <input type="checkbox"/> | Testing Laboratory: | |
| Testing location/ address : | CSA Group Bayern GmbH Ohmstrasse 1-4 94342 Strasskirchen Germany | |
| Tested by (name, function, signature) : | Nikolaus Fischer (Test engineer) | |
| Approved by (name, function, signature) ... : | Thomas Janackovic (Certifier) | |

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| General remarks: | |
| Information to the test report no.: S40585-00-00TJ | |
| CSA Group Bayern GmbH Ohmstrasse 1-4 94342 Strasskirchen Germany | IEC 60065:2014 (Eight Edition) EN 60065:2014 |
| Type of Appliance: | Power Supply Unit |
| Made by: | Modrow audio engineering |
| Trade Mark: | Modrow audio engineering |
| Model / Type: | ECO-PS 14 VA |
| Rated: | Input: ~220-240 V AC – 50/60Hz Output: 2x 20 V DC / 300 mA 1x 3.3 V DC / 10 mA |
| Modification on the Appliance: | |
| | |

| Test Report History: | |
|---|---|
| This report may consist of more than one report and is valid only with additional or previous issued reports: | |
| Test Report No.: | Modifications: |
| S40585-00-00TJ (this report) Dated on 2016-06-24 Pages 29 | Origin |
| S40585-00-00TJ Dated on 2016-05-31 Pages 29 | Origin Test Report. IEC 60065:2014 (Eight Edition) EN 60065:2014. |

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| List of Attachments (including a total number of pages in each attachment): 1) S40585-00-01TJ_Att1_Photos, 8 pages | |
| Summary of testing: | |
| Tests performed (name of test and test clause): | Testing location: CSA Group Bayern GmbH Ohmstrasse 1-4 94342 Strasskirchen Germany |

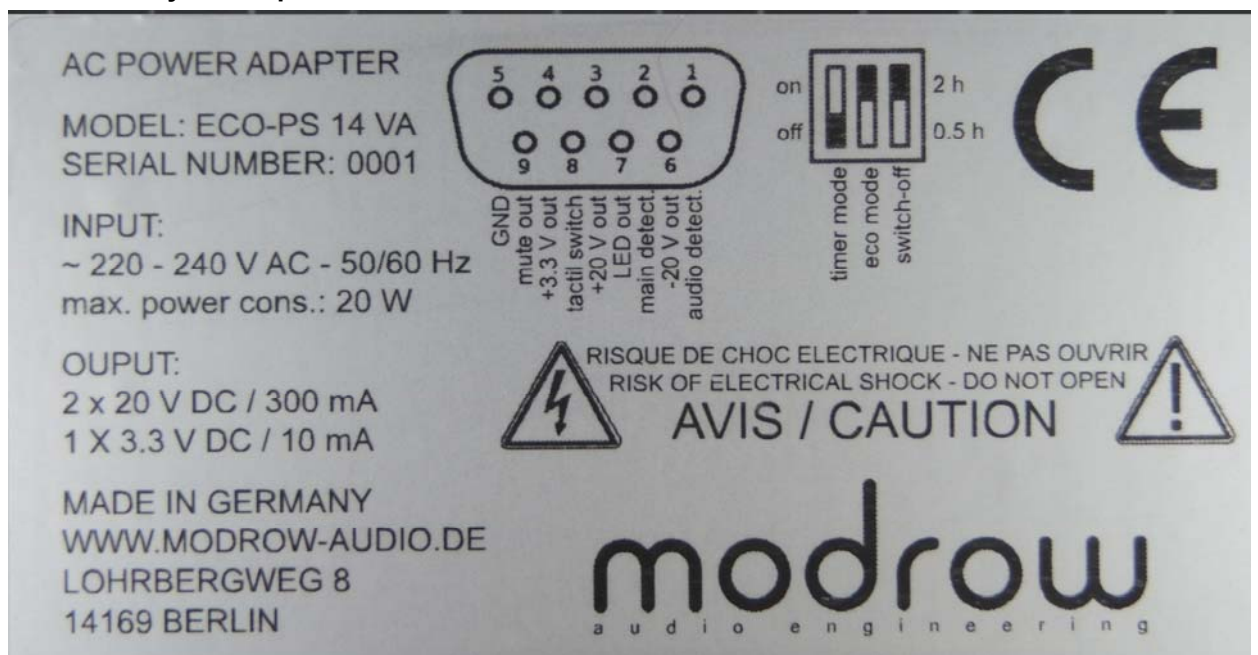
Summary of compliance with National Differences:

List of countries addressed

The product fulfils the requirements of IEC 60065:2014 (Eight Edition) / EN 60065:2014.

Copy of marking plate:

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



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| Test item particulars: | |
| Classification of installation and use: Portable | |
| Supply Connection: Detachable mains cord | |
|: | |
| Possible test case verdicts: | |
| - test case does not apply to the test object.....: N/A (Not Applicable) | |
| - test object does meet the requirement.....: P (Pass) | |
| - test object does not meet the requirement.....: F (Fail) | |
| Testing: | |
| Date of receipt of test item: 2016-03-09 | |
| Date (s) of performance of tests: 2016-03-13 to 2016-05-10 | |
| General remarks: | |
| <p>"(See Enclosure #)" refers to additional information appended to the report. "(See appended table)" refers to a table appended to the report.</p> <p>Throughout this report a <input type="checkbox"/> comma / <input checked="" type="checkbox"/> point is used as the decimal separator.</p> <p>Statement of the measurement uncertainty</p> <p>The data and results referenced in this document are true and accurate. The reader is cautioned that there may be errors within the calibration limits of the equipment and facilities. The measurement uncertainty was determined for all measurements listed in this test report acc. to GUM („Guide to the Expression of Uncertainty in Measurement“) and ISO Guide 115 (“Application of uncertainty of measurement to conformity assessment activities in the electro technical sector“) and checked against the requirements of current CTL decision sheet no. 251 and documented in the quality system acc. to DIN EN ISO/IEC 17025. Furthermore, component and process variability of devices similar to that tested may result in additional deviation. The manufacturer has the sole responsibility of continued compliance of the device.</p> | |
| Manufacturer’s Declaration per sub-clause 4.2.5 of IEC 60335-1: | |
| The application for obtaining a CB Test Certificate includes more than one factory location and a declaration from the Manufacturer stating that the sample(s) submitted for evaluation is (are) representative of the products from each factory has been provided: | <input type="checkbox"/> Yes <input type="checkbox"/> Not applicable |
| When differences exist; they shall be identified in the General product information section. | |
| Name and address of factory (ies) : | |
| | |

General product information:

Mains supplied class I power supply for the use together with audio equipment in the home and professional range.

The product is supplied by an appliance inlet. Output power and In/Out signals are available on a D-SUB connector.

| IEC 60065 | | | |
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| Clause | Requirement + Test | Result - Remark | Verdict |
| 3 | GENERAL REQUIREMENTS | | P |
| | Safety class of the apparatus | Class I | P |
| 4 | GENERAL TEST CONDITIONS | | N/A |
| 4.1.4 | Ventilation instructions require the use of the test box | not required | N/A |
| 5 | MARKING AND INSTRUCTIONS | | P |
| 5.1 | General requirements | | |
| | Comprehensible and easily discernible | Located on the enclosure outside (bottom) | P |
| | Permanent durability against water and petroleum spirit | The marking withstands the required test. | P |
| 5.2 | Identification and supply rating | | |
| | a) Identification, maker | Modrow, Berlin | P |
| | b) Model number or type reference | ECO-PS 14 VA | P |
| | c) Class II symbol or Class II with functional earth symbol if applicable | Class I Device | N/A |
| | d) Nature of supply | AC supply | P |
| | e) Rated supply voltage | 220 – 240 V ~ | P |
| | f) Mains frequency if safety dependant | 50 – 60 Hz | P |
| | g) Rated current or power consumption for apparatus supplied by supply apparatus for general use, on apparatus or in instruction manual | Mains supplied | N/A |
| | Measured current or power consumption | | N/A |
| | Deviation % (max 10%) | | N/A |
| | h) Rated current or power consumption for apparatus intended for connection to an a.c. mains supply : | 20 W | P |
| | Measured current or power consumption | 19.05 W | P |
| | Measured current or power consumption for Television set | No television set | N/A |
| | Deviation % (max 10%) | < 10% | N/A |
| | Symbols explained in the user manual | | N/A |
| 5.3 | Terminals | | P |
| | a) Earth terminal | Appliance inlet | P |
| | b) Hazardous live terminals | No hazardous live terminals. | N/A |
| | c) Markings on supply output terminals | No supply output terminals | N/A |
| 5.4 | Caution marking | | P |

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| Clause | Requirement + Test | Result - Remark | Verdict |
| | a) Use of triangle with exclamation mark | Visible on marking plate | P |
| | b) Marking on loudspeaker grille, IEC 60417-5036 | No loudspeaker grille present | N/A |
| | c) User-replaceable coin / button cell battery marking | No battery available | N/A |
| 5.5 | Instructions | | P |
| 5.5.1 | Safety relevant information | | P |
| 5.5.2 | a) Mains powered equipment not exposed to dripping or splashing. Warning concerning objects filled with liquid, etc. | Operation manual | P |
| | b) Hazardous live terminals, instructions for wiring | Refer Above | N/A |
| | c) Instructions for replacing lithium battery | No battery implemented | N/A |
| | d) Class I earth connection warning | Operation manual | P |
| | e) Instructions for multimedia system connection | | |
| | f) Special stability warning for attachment of the apparatus to the floor/wall | Table top | N/A |
| | g) Warning: battery exposure to heat | No battery | N/A |
| | h) Warning: protective film on CRT face | No CRT | N/A |
| | i) Warning: Non-floor standing TV >7kg | No TV | N/A |
| | j) Warning: User replaceable coin / button cell battery | No battery | N/A |
| 5.5.3 | a-b) Disconnect device: plug/coupler or all-pole mains switch location, accessibility and markings | Mains plug as disconnect device | N/A |
| | c) Instructions for permanently connected equipment | Not permanently connected to the mains | N/A |
| | Marking, signal lamps or similar for completely disconnection from the mains | Not existing | N/A |
| 6 | HAZARDOUS RADIATION | | N/A |
| 6.1 | Ionizing radiation < 36 pA/kg (0,5 mR/h) | | N/A |
| | Ionizing radiation under fault condition | | N/A |
| 6.2 | Laser radiation, emission limits to IEC 60825-1:2007 | Class (See appended report) | N/A |
| | Emission limits under fault conditions | Class (See appended report) | N/A |
| 6.3 | Light emitting diodes (LEDs) according to IEC 62471 | Device has no LEDs | N/A |
| 7 | HEATING UNDER NORMAL OPERATING CONDITIONS | | P |
| 7.1 | General | | P |
| 7.1.1 | Temperature rises not exceeding specified values; fuse links and other protective devices defeated | (see appended table) | P |

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|-----------|--|----------------------|---------|
| Clause | Requirement + Test | Result - Remark | Verdict |
| 7.1.2 | Temperature rise of accessible parts | (see appended table) | P |
| 7.1.3 | Temperature rise of parts providing electrical insulation | (see appended table) | P |
| 7.1.4 | Temperature rise of parts acting as a support or as a mechanical barrier | (see appended table) | P |
| 7.1.5 | Temperature rise of windings | (see appended table) | P |
| 7.1.6 | Parts not subject to a limit under 7.1.1 to 7.1.4 | (see appended table) | P |
| 7.2 | Softening temperature of insulating material supporting parts conductively connected to the mains carrying a current > 0,2 A at least 150 °C | (see appended table) | N/A |

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| 8 | CONSTRUCTIONAL REQUIREMENTS WITH REGARD TO THE PROTECTION AGAINST ELECTRIC SHOCK | | P |
| 8.1 | Conductive parts covered by lacquer, paper, untreated textile oxide films and beads etc. considered to be bare | No such parts inside | N/A |
| 8.2 | No shock hazard when changing voltage setting device, fuse-links or handling drawers etc. | No voltage setting or drawers and no fuse access. | N/A |
| 8.3 | Insulation of hazardous live parts not provided by hygroscopic material | No hygroscopic materials used | N/A |
| 8.4 | No risk of electric shock from accessible parts or from parts rendered accessible following the removal of a cover which can be removed by hand | No covers which can be removed by hand. | N/A |
| 8.5 | Class I apparatus | | P |
| | Basic insulation between hazardous live parts and earthed accessible parts | Accessible conductive parts are separated from hazardous live parts by basic insulation. | P |
| | Resistors bridging basic insulation complying with 14.2 a) | Inside approved mains filter only | N/A |
| | Capacitors bridging basic insulation complying with 14.3.2 a) | Inside approved mains filter only | N/A |
| | Protective earthing terminal | Appliance inlet with earth terminal | P |
| 8.6 | Class II apparatus | | N/A |
| | a) Basic and supplementary insulation between hazardous live parts and accessible parts | Class I apparatus | N/A |
| | b) Reinforced insulation between hazardous live parts and accessible parts | No reinforced insulation | N/A |
| 8.7 | Components bridging insulation | | N/A |
| | Basic insulation bridged by components complying with 14.4.5.3 | Not used | N/A |

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| Clause | Requirement + Test | Result - Remark | Verdict |
| | Components bridging basic, supplementary, double or reinforced insulation complying with 14.2 a) or 14.4 | | N/A |
| | Basic and supplementary insulation each being bridged by a capacitor or RC-unit complying with 14.3.2 a) | | N/A |
| | Double or reinforced insulation being bridged with 2 capacitors or RC-units in series complying with 14.3.2 a) | | N/A |
| | Double or reinforced insulation being bridged with a single capacitor or RC-unit complying with 14.3.2 b) | | N/A |
| 8.8 | Insulation thickness and thin sheet materials | | N/A |
| | Basic or supplementary insulation > 0,4 mm (mm) : | | |
| | Reinforced insulation > 0,4 mm (mm) | | N/A |
| | Thin sheet material used inside the equipment | | N/A |
| | Basic or supplementary insulation, at least two layers, each meeting 10.4 | | N/A |
| | Basic or supplementary insulation, three layers any two of which meet 10.4 | | N/A |
| | Reinforced insulation, two layers each of which meet 10.4 | | N/A |
| | Reinforced insulation, three layers any two which meet 10.4 | | N/A |
| 8.9 | Adequate insulation between internal hazardous live conductors and accessible parts, or between internal hazardous live parts and conductors connected to accessible parts | | N/A |
| 8.10 | Double insulation between accessible parts and conductors connected to the mains | | N/A |
| | Double insulation between conductors connected to accessible parts and parts connected to the mains | | N/A |
| 8.11 | Detaching of wires | | P |
| | No undue reduction of creepage or clearance distances if wires become detached | Internal PE wire efficient fixed, no other wiring | P |
| | Vibration test carried out | No | |
| 8.12 | Adequate fastening of windows, lenses, lamp covers etc. (pull test 20 N for 10 s) | Not existing | N/A |
| 8.13 | Adequate fastening of covers (push/pull test 50 N for 10 s) | Not existing | N/A |
| 8.14 | No risk of damage to the insulation of internal wiring due to hot parts or sharp edges | No internal wiring | N/A |
| 8.15 | Only special supply equipment can be used | Mains supply | N/A |

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| Clause | Requirement + Test | Result - Remark | Verdict |
| 8.16 | Insulated winding wire without additional interleaved insulation | Safety approved components only | N/A |
| 8.17 | Endurance test as required by 8.16 | | N/A |
| 8.18 | Disconnection from the mains | | P |
| | Disconnect device | Appliance coupler is used as disconnection device | P |
| | All-pole switch or circuit breaker with >3mm contact separation | No switch, no circuit braker | N/A |
| | Mains switch ON indication | No switch | N/A |
| 8.19 | Switch not fitted in the mains cord | Appliance inlet is used as disconnection device | N/A |
| 8.20 | Bridging components comply with clause 14 | No switch | N/A |
| 8.21 | Non-separable thin sheet material | Not used | N/A |
| 9 | ELECTRIC SHOCK HAZARD UNDER NORMAL OPERATING CONDITION | | P |
| 9.1 | Testing on the outside | | |
| 9.1.1 | General | | |
| 9.1.1.1 | Requirements | | P |
| | Accessible parts shall not be hazardous live | Accessible parts are not hazardous live | P |
| | Inaccessible terminals are not accessible or comply with relevant requirements | | P |
| | For voltages >1000 V ac or >1500 V dc complies with clause 13.3.1 for basic insulation : | Supply voltage: 220V - 240V | N/A |
| 9.1.1.2 | Determination of hazardous live parts | | P |
| | a) Open circuit voltages | Touch current measured only | N/A |
| | b) Touch current measured from terminal devices using the network in annex D : | Voltage U ₂ | P |
| | c) Discharge not exceeding 45 µC | | P |
| | d) Energy of discharge not exceeding 350 mJ | | P |
| 9.1.1.3 | Test with test finger and test probe | No access | P |
| 9.1.2 | No hazardous live shafts of knobs, handles or levers | Device has no live knobs, handles or levers | N/A |
| 9.1.3 | Ventilation holes and other holes tested by means of 4 mm x 100 mm test pin | No ventilation holes available. | N/A |
| 9.1.4 | Terminal devices tested with 1 mm x 20 mm test pin (10 N); test probe D of IEC 61032 | No access | P |
| | Terminal devices tested with 1 mm x 100 mm straight wire (1 N); test probe D of IEC 61032 | No access | P |

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| Clause | Requirement + Test | Result - Remark | Verdict |
| 9.1.5 | Pre-set controls tested with 2.5 mm x 100 mm test pin (10 N); test probe C of IEC 61032 | | P |
| 9.1.6 | Withdrawal of the mains plug | | P |
| | No shock hazard due to stored charge after 2 s ... : | | P |
| | Bleeder resistor(s) comply with 14.2 or no shock hazard when open circuited | | |
| | If C is not greater than 0,1 μ F no test needed | X = 15nF; Y = 2.2nF | P |
| 9.1.7 | Resistance to external force | | P |
| | a) Test probe 11 of IEC 61032 for 10 s (50 N) | | P |
| | b) Test hook of fig. 4 for 10 s (20 N) | | P |
| | c) 30 mm diameter test tool for 5 s (100 or 250 N) | | P |
| 9.2 | No hazard after removing a cover by hand | No cover | N/A |

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| 10 | INSULATION REQUIREMENTS | | P |
| 10.2 | Insulation resistance (M Ω) at least 2 M Ω min. after surge test for basic and 4 M Ω min. for reinforced insulation | Insulation resistance exceeds 500M Ω | P |
| 10.3 | Humidity treatment 48 h or 120 h | 48 h | P |
| 10.4 | Insulation resistance and dielectric strength | | P |
| | Between parts of different polarity directly connected to the mains | (see appended table) | P |
| | Between parts separated by BASIC or SUPPLEMENTARY insulation | (see appended table) | P |
| | Between parts separated by REINFORCED insulation | (see appended table) | N/A |

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| 11 | FAULT CONDITIONS | | P |
| 11.1 | No shock hazard under fault condition | No hazard | P |
| 11.2 | Heating | | P |
| 11.2.1 | Requirements | | P |
| | No danger of fire to the surroundings | No danger | P |
| | Safety not impaired by abnormal heat | Not impaired | P |
| | Flames extinguish within 10 seconds | No flames | N/A |
| | No hazard from softening solder | No softening solder | N/A |
| | Soldered terminations not used as protective mechanism | No protective solder | P |
| 11.2.2 | Measurement of temperature rises | (see appended table) | P |
| 11.2.3 | Temperature rise of accessible parts | (see appended table) | P |

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| Clause | Requirement + Test | Result - Remark | Verdict |
| 11.2.4 | Temperature rise of parts, other than windings and printed boards, providing electrical insulation | (see appended table) | P |
| 11.2.5 | Temperature rise of parts acting as a support or mechanical barrier | Not existing | N/A |
| 11.2.6 | Temperature rise of windings | (see appended table) | P |
| 11.2.7 | Printed boards | | P |
| | Temperature rise does not exceed the limits of table 3 or exceed the limits of table 3 by max. 100 K for max. 5 min | (see appended table) | P |
| | a) Temperature rise of V-0 or VTM-0 printed circuit boards exceeding the limits of table 3 by not more than 100 K for an area not greater than 2 cm ² | | N/A |
| | b) Temperature rise of V-0 or VTM-0 printed circuit boards exceeding the limits of table 3 up to 300 K for an area not greater than 2 cm ² for a maximum of 5 min | | N/A |
| | Meets all the special conditions if conductors on printed circuit boards are interrupted | | N/A |
| | Class I protective earthing maintained | maintained | P |
| 11.2.8 | Temperature rise of parts not subject to the limits of 11.2.2 to 11.2.7 shall not exceed the limits in table 3, item e), "Fault conditions". | (see appended table) | |

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| 12 | MECHANICAL STRENGTH | | P |
| 12.1 | Complete apparatus | | P |
| 12.1.1 | The apparatus have adequate mechanical strength | | P |
| 12.1.2 | Bump test where mass >7 kg | < 7kg | N/A |
| 12.1.3 | Vibration test | Visual check | P |
| 12.1.4 | Impact hammer test | No effect | P |
| | Steel ball test | No effect | P |
| 12.1.5 | Drop test for portable apparatus where mass ≤ 7 kg | No effect | P |
| 12.1.6 | Thermoplastic enclosures stress relief test | metal enclosure | N/A |
| 12.2 | Fixing of knobs, push buttons, keys and levers | Not existing | N/A |
| 12.3 | Remote controls with hazardous live parts | Not existing | N/A |
| 12.4 | Drawers (pull test 50 N, 10 s) | No drawer | N/A |
| 12.5 | Antenna coaxial sockets providing isolation | No socket | N/A |
| 12.6 | Telescoping or rod antennas | | N/A |
| 12.6.1 | 6,0mm diameter end | | N/A |
| | Prevented from falling into the apparatus | | N/A |
| 12.6.2 | Physical securement, removal prevented | | N/A |

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| Clause | Requirement + Test | Result - Remark | Verdict |
| 12.7 | Apparatus containing coin / button cell batteries | | N/A |
| 12.7.2 | Reduced possibility for children to remove battery | | N/A |
| 12.7.3 | Tests | | N/A |
| 12.7.3.2 | Stress relief test | | N/A |
| 12.7.3.3 | Battery replacement test | | N/A |
| 12.7.3.4 | Drop test | | N/A |
| 12.7.3.5 | Impact test | | N/A |
| 12.7.4 | Battery not accessible; or not removable | | N/A |
| 13 | CLEARANCES AND CREEPAGE DISTANCES | | P |
| 13.1 | Clearances in accordance with 13.3 | See table | P |
| | Creepage distances in accordance with 13.4 | See table | P |
| 13.2 | Determination of working voltage | considered | P |
| 13.3 | Clearances | | P |
| 13.3.1 | Comply with 13.3 or Annex J | | P |
| 13.3.2 | Circuits conductively connected to the mains comply with table 8 and, where applicable, table 9 | Table 8 only | P |
| 13.3.3 | Circuits not conductively connected to the mains comply with table 10 | Smaller distances handled by fault condition test | P |
| 13.3.4 | Measurement of transient voltages | Not measured | N/A |
| 13.4 | Creepage distances not less than appropriate table 11 minimum values | Table 11 | P |
| 13.5 | Printed boards | | N/A |
| 13.5.1 | Conductors complying with pull-of and peel strength requirements, one of which may be conductively connected to the mains, as in fig. 10 | Not applied | N/A |
| 13.5.2 | Type B coated printed circuit boards complying with IEC 60664-3 (basic insulation only) | | N/A |
| 13.6 | Conductive parts along uncemented joints clearances and creepage distances comply with 13.3 and 13.4 | | N/A |
| | Conductive parts along reliably cemented joints comply with 8.8 | | N/A |
| | Temperature cycle test and dielectric strength test | | N/A |
| | 500V test for transformers, magnetic coupler and similar devices, if insulation is relied upon for safety | | N/A |
| 13.7 | Enclosed, enveloped or hermetically sealed parts not conductively connected to the mains, clearances and creepage distances as in table 12 | Not existing | N/A |

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| Clause | Requirement + Test | Result - Remark | Verdict |
| 13.8 | Parts filled with insulating compound, meeting the requirements of 8.8 | | N/A |
| 14 | COMPONENTS | | P |
| 14.1 | Flammability according to IEC 60695-11-10 or annex G, or 20.2.5 | considered | P |
| 14.2 | Resistors | | N/A |
| | Resistors separately approved | Inside approved mains filter | N/A |
| | a) Resistors between hazardous live parts and accessible metal parts | | N/A |
| | b) Resistors, other than between hazardous live parts and accessible parts | | N/A |
| 14.3 | Capacitors and RC units | | N/A |
| | Capacitors separately approved : | Inside approved mains filter | N/A |
| 14.3.1 | Damp heat test duration 21 days | | N/A |
| 14.3.2 | Y capacitors tested to IEC 60384-14:2005 | Y1 Y2 | N/A |
| 14.3.3 | X capacitors tested to IEC 60384-14:2005 | X1 X2 | N/A |
| 14.3.4 | Capacitors operating at mains frequency but not connected to the mains: tests for X2 | | N/A |
| 14.3.6 | Capacitors with volume exceeding 1750 mm ³ , where short-circuit current exceeds 0,2 A: compliance with IEC 60384-1, 4.38 category B or better | | N/A |
| | Capacitors with volume exceeding 1750 mm ³ , mounted closer to a potential ignition source than table 13 permits: compliance with IEC 60384-1, 4.38 category B or better | | N/A |
| 14.4 | Inductors and windings | | P |
| 14.4.1 | Comply with IEC 61558-1, IEC 61558-2 (as relevant) and clause 20.2.5 | Both Block transformers comply with relevant standard | P |
| | Transformers and inductors separately approved : | Yes | P |
| 14.4.2 | Transformers and inductors marked with manufacturer's name and type | Block, FLO 14/18 Block, B 1501083 | P |
| 14.4.3 | General | | P |
| | Insulation material complies with clause 20.2.5 | | P |
| 14.4.4 | Constructional requirements | | N/A |
| 14.4.4.1 | Clearances and creepage distances comply with clause 13 | | N/A |
| 14.4.4.2 | Transformers meet the constructional requirements | | N/A |
| 14.4.5 | Separation between windings | | N/A |

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| Clause | Requirement + Test | Result - Remark | Verdict |
| 14.4.5.1 | Class II transformers have adequate separation between hazardous live parts and accessible parts (double or reinforced insulation) | | N/A |
| | Coil formers and partition walls > 0,4 mm | | N/A |
| 14.4.5.2 | Class I transformers, with basic insulation and protective screening only if all 7 conditions are met | | N/A |
| 14.4.5.3 | Separating transformers with at least basic insulation | | N/A |
| 14.4.6 | Insulation between hazardous live parts and accessible parts | | N/A |
| 14.4.6.1 | Class II transformers have adequate insulation between hazardous live parts and accessible parts (double or reinforced insulation) | | N/A |
| | Coil formers and partition walls > 0,4 mm | | N/A |
| 14.4.6.2 | Class I transformers have adequate insulation between hazardous live parts and accessible conductive parts or those conductive parts or protective screens connected to a protective earth terminal | | N/A |
| | Winding wires connected to protective earth have adequate current-carrying capacity | | N/A |
| 14.5 | High voltage components and assemblies (U > 4kV peak) | | N/A |
| 14.5.1 | Component meets category V-1 of IEC 60695-11-10 | No high voltage component present | N/A |
| 14.5.2 | High voltage transformers and multipliers | | N/A |
| 14.5.3 | High voltage assemblies and other parts | | N/A |
| 14.6 | Protective devices | | P |
| 14.6.1 | Protective devices used within their ratings | Approved appliance inlet with integrated fuses | P |
| | External clearances and creepage distances meet requirement of clause 13 for the voltage across the device when opened | | P |
| 14.6.2 | Thermal releases | | N/A |
| 14.6.2.1 | Comply with 14.6.2.2, 14.6.2.3 or 14.6.2.4 | | N/A |
| 14.6.2.2 | a) Thermal cut-outs separately approved | | N/A |
| | b) Thermal cut-outs tested as part of the submission | | N/A |
| 14.6.2.3 | a) Thermal links separately approved | | N/A |
| | b) Thermal links tested as part of the submission | | N/A |
| 14.6.2.4 | Thermal devices re-settable by soldering | | N/A |
| 14.6.3 | Fuses and fuse holders | | P |
| 14.6.3.1 | Fuse-links in the mains circuit according to IEC 60127 | IEC fuses with high breakage capacity. | P |

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|------------------|---|--------------------------------|------------|
| Clause | Requirement + Test | Result - Remark | Verdict |
| 14.6.3.2 | Correct marking of fuse-links adjacent to holder ... : | Markings applied in the manual | P |
| 14.6.3.3 | Not possible to connect fuses in parallel | Not possible | P |
| 14.6.3.4 | Not possible to touch hazardous live parts when replacing fuse-links without the use of a tool : | Only with tool | N/A |
| 14.6.4 | PTC thermistors comply with IEC 60730-1:2010 | Not existing | N/A |
| | PTC devices (>15 W) category V-1 or better | Not existing | N/A |
| 14.6.5 | Circuit protectors have adequate breaking capacity and their position is correctly marked | No circuit protectors | N/A |
| 14.7 | Switches | | N/A |
| 14.7.1 a) | Separate testing to IEC 61058-1 including: - 10 000 operations - Normal pollution suitability - For CRT TV's, make and break speed independent of speed of actuation - V-0 or compliance with G.1.1 | Peak surge current for ____ : | N/A |
| 14.7.1 b) | Tested in the apparatus | | N/A |
| | Switch controlling > 0.2A with open contact voltage > 35 V (peak) / 24 V dc complying with 14.6.3, 14.6.4 and V-0 or G.1.1 | | N/A |
| | Switch controlling > 0.2A with open contact voltage < 35 V (peak) / 24 V dc complying with 14.6.3 and V-0 or G.1.1 | | N/A |
| | Switch controlling ≤ 0.2A with open contact voltage > 35 V (peak)/24 V dc complying with 14.6.4 and V-0 or G.1.1 | | N/A |
| 14.7.2 | Switch tested to 14.7.1 b) checked according to IEC 61058-1 clause 13.1 and 10 000 operation test | | N/A |
| 14.7.3 | Switch tested to 14.6.1 b) compliant with IEC 61058-1 subclause 16.2.2 d) and m) not attaining excessive temperatures in use | | N/A |
| 14.7.4 | Switch tested to 14.6.1 b) has adequate dielectric strength | | N/A |
| 14.7.5 | Mains switch controlling mains socket outlets additional tests to IEC 61058-1 | | N/A |
| 14.8 | Safety interlocks according to 2.8 of IEC 60950-1 | | N/A |
| 14.9 | Voltage setting device and the like are not likely to be changed accidentally | | N/A |
| 14.10 | Motors | | N/A |
| 14.10.1 | a) Endurance test on motors | Device contains no motors | N/A |
| | b) Motor start test | | N/A |
| | Dielectric strength test | | N/A |
| 14.10.2 | Not adversely affected by oil or grease etc. | | N/A |

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|------------------|--|---------------------------------------|------------|
| Clause | Requirement + Test | Result - Remark | Verdict |
| 14.10.3 | Protection against moving parts | | N/A |
| 14.10.4 | Motors with phase-shifting capacitors, three-phase motors and series motors meet clause. B.8, B.9 and B.10 of IEC 60950-1, Annex B | | N/A |
| 14.11 | Batteries | | N/A |
| 14.11.1 | Comply with IEC 62133 if applicable | Device does not contain batteries | N/A |
| | Batteries mounted with no risk of accumulation of flammable gases | | N/A |
| 14.11.2 | No possibility of recharging user replaceable non-rechargeable batteries | | N/A |
| 14.11.3 | Recharging currents and times within manufacturers limits | | N/A |
| | Lithium batteries discharge and reverse currents within the manufacturers limits | | N/A |
| 14.11.4 | Battery mould stress relief | | N/A |
| 14.11.5 | Battery drop test | | N/A |
| 14.12 | Optocouplers | | N/A |
| | Comply with constructional requirements of clause 8 | No optocouplers present in the device | N/A |
| | External clearances and creepage comply with 13.1 | | N/A |
| | Compound completely filling the casing or internal clearances and creepage comply with 13.1 | | N/A |
| | a) Complies with 13.6 (jointed insulation) and N.3.2 | | N/A |
| | b) Complies with IEC 60747-5-5:2007 | $V_{ini,a} =$ $V_{ini,b} =$ | N/A |
| | c) Complies with 13.8 | | N/A |
| 14.13 | Surge suppression varistors | | N/A |
| | Comply with IEC 61051-2 | | N/A |
| | Not connected between mains and accessible parts except for earthed parts of permanently connected apparatus | | N/A |
| | GDT bridging basic insulation complies with electric strength and distance requirements | | N/A |
| | Complies with the climatic, voltage, current pulse, fire hazard and thermal stress requirements of 14.13 | | N/A |
| 15 | TERMINALS | | P |
| 15.1 | Plugs and sockets | | P |
| 15.1.1 | Mains plug, appliance inlet, interconnection couplers and mains socket-outlet meet the appropriate standard | Safety approved appliance inlet | P |

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|------------------|---|---|------------|
| Clause | Requirement + Test | Result - Remark | Verdict |
| | Overloading of plugs or appliance inlets prevented if the apparatus has mains socket outlets | No mains outlet | N/A |
| | Overloading of internal wiring prevented if the apparatus has mains socket outlets | No mains outlet | N/A |
| 15.1.2 | Design of connectors other than for mains power | Sub D connector | P |
| | Design of sockets with symbol of 5.3 b) design | Not existing | N/A |
| 15.1.3 | Design of terminals and connectors used in output circuits of supply apparatus | Sub D connector | P |
| 15.2 | Provision for protective earthing | | P |
| | Accessible conductive parts of Class I equipment reliably connected to earth terminal, within equipment | Reliable connected | P |
| | Protective earth conductors correctly fixed and coloured | All protective earth wires are coloured green/yellow. | P |
| | Separate protective earth terminal near mains terminal and comply with 15.3 | Not existing | N/A |
| | Protective earth terminal resistant to corrosion | | P |
| | Earth resistance test: $< 0,1 \Omega$ at 25 A | The measured values are within the limits. I_{test} : 25 A Test duration: 1 min During the test the mains cable was not connected | P |
| 15.3 | Terminals for external flexible cords and for permanent connection to the mains supply | | N/A |
| 15.3.1 | Adequate terminals for connection of permanent wiring | | N/A |
| 15.3.2 | Reliable connection of non-detachable cords | The unit is provided with a detachable power supply cord | N/A |
| | Not soldered to conductors of a printed circuit board | -- | N/A |
| | Adequate clearances and creepage distances between connections should a wire break away | -- | N/A |
| | Wire secured by additional means to the conductor | -- | N/A |
| 15.3.3 | Screws and nuts clamping conductors have adequate threads: ISO 261, ISO 262 or similar | No screws or nuts are clamping conductors | N/A |
| 15.3.4 | Conductors adequately fixed (two independent fixings) | -- | N/A |
| 15.3.5 | Terminals allow connection of conductors having appropriate cross-sectional area | -- | N/A |
| 15.3.6 | Terminals to 15.3.3 have sizes required by table 16 | | N/A |
| 15.3.7 | Terminals clamp conductors between metal and have adequate pressure | | N/A |

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|------------------|--|--|------------|
| Clause | Requirement + Test | Result - Remark | Verdict |
| | Terminals designed to avoid conductor slipping out when tightened | | N/A |
| | Terminals adequately fixed when tightened or loosened (no loosening, wiring not stressed, distances not reduced) | | N/A |
| 15.3.8 | Terminals carrying a current more than 0,2 A: contact pressure not transmitted by insulating material except ceramic | | N/A |
| 15.3.9 | Termination of non-detachable cords: wires terminated near to each other | | N/A |
| | Terminals located and shielded: test with 8 mm strand | | N/A |
| 15.4 | Devices forming a part of the mains plug | | N/A |
| 15.4.1 | No undue strain on mains socket-outlets | | N/A |
| 15.4.2 | Device complies with standard for dimensions of mains plugs | | N/A |
| 15.4.3 | Device has adequate mechanical strength (tests a,b,c) | | N/A |
| 16 | EXTERNAL FLEXIBLE CORDS | | P |
| 16.1 | Mains cords sheathed type, complying with IEC 60227 for PVC or IEC 60245 for synthetic rubber cords | Mains cord not supplied with the product | N/A |
| | Non-detachable cords for Class I have green/yellow core for protective earth | | N/A |
| 16.2 | Mains cords conductors have adequate cross-sectional area for rated current consumption of the equipment | | N/A |
| 16.3 | Flexible cords not complying with 16.1, used for interconnections between separate units of equipment used in combination and carrying hazardous live voltages comply with a) and b) | | N/A |
| 16.4 | Flexible cords used for connection between equipment have adequate cross-sectional areas to avoid temperature rise under normal and fault conditions | | N/A |
| 16.5 | Adequate strain relief on external flexible cords | | N/A |
| | Not possible to push cord back into equipment | | N/A |
| | Strain relief device unlikely to damage flexible cord | | N/A |
| | For mains cords of Class I equipment, hazardous live conductors become taut before earth conductor | | N/A |

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|------------------|---|-----------------|---------|
| Clause | Requirement + Test | Result - Remark | Verdict |
| 16.6 | Apertures for external flexible cord: no risk of damage to the cord during assembly or movement in use | | N/A |
| 16.7 | Transportable apparatus have appliance inlet according to IEC 60320-1 or means of stowage to protect the cord | Appliance inlet | P |

| 17 | ELECTRICAL CONNECTIONS AND MECHANICAL FIXINGS | | P |
|-----------|--|---------------------------------------|-----|
| 17.1 | Table 20 torque test metal thread, 5 times..... : | 5 x 0.5 Nm | P |
| | Table 20 torque test non-metallic thread, 10 times... : | Metallic thread | N/A |
| 17.2 | Correct introduction into female threads in non-metallic material | Metallic | N/A |
| 17.3 | Cover fixing screws captive or no hazard when replaced by a screw whose length is 10 times its diameter | No hazard using a 30mm screw | P |
| 17.4 | No loosening of conductive parts carrying a current > 0,2 A | Not existing | N/A |
| 17.5 | Contact pressure not transmitted through insulating material other than ceramic for connections carrying a current > 0,2 A | Not transmitted by isolating material | N/A |
| 17.6 | Stranded conductors of flexible supply cords carrying a current > 0,2 A with screw terminals not consolidated by solder | Appliance inlet | N/A |
| 17.7 | Cover fixing devices have adequate strength and their positioning is unambiguous | No cover fixings | N/A |
| 17.8 | Fixing means for detachable legs or stands provided | No legs or stands | N/A |
| 17.9 | Internal pluggable connections, affecting safety, unlikely to become disconnected | PE conductor effectively fixed | P |

| 18 | MECHANICAL STRENGTH OF PICTURE TUBES AND PROTECTION AGAINST THE EFFECTS OF IMPLOSION | | N/A |
|-----------|---|--|-----|
| 18.1 | Comply with IEC 61965 or 18.2 | | N/A |
| 18.2 | Non-intrinsically protected tubes | | N/A |

| 19 | STABILITY AND MECHANICAL HAZARDS | | P |
|-----------|--|------------------|-----|
| 19.1 | Apparatus > 7kg have adequate stability or is required to be fastened in place and provided with the warning of 5.5.2 f) | < 7 kg (1.14 kg) | N/A |
| 19.2 | Test at 10° to the horizontal | | N/A |
| 19.3 | Vertical force test 100 N applied downwards | | N/A |
| 19.4 | Horizontal force test, 100 N or 13% of weight, applied horizontally to point of least stability | | N/A |

| IEC 60065 | | | |
|------------------|--|---|------------|
| Clause | Requirement + Test | Result - Remark | Verdict |
| 19.5 | Edges or corners not hazardous | No sharp edges | P |
| 19.6 | Mechanical strength of glass | | N/A |
| 19.6.1 | Glass surfaces (exc.laminated) with an area exceeding 0,1 m ² or major dimension > 450 mm, pass the test of 12.1.4 | Device does not contain glass components | N/A |
| 19.6.2 | Fragmentation test | | N/A |
| 19.7 | Wall or ceiling mounting means | | N/A |
| 19.7.1 - 19.7.3 | Not dislodged and remain mechanically intact after test according to 19.7.2 Test 1, Test 2 or Test 3..... : | Device is not intended to be mounted | N/A |
| 20 | RESISTANCE TO FIRE | | P |
| 20.1 | Start and spread of fire is prevented | Primary and secondary fusing, V-0 PCB material, metal enclosure | P |
| 20.2 | Electrical components and mechanical parts | | P |
| 20.2.1 | a) Exemption for components contained in an enclosure of material V-0 to IEC 60695-11-10 with openings not exceeding 1 mm in width | | N/A |
| | b) Exemption for small components | | P |
| 20.2.2 | Electrical components meet the requirements of Clause 14 or 20.2.5 | Components according to clause 14 | P |
| 20.2.3 | Insulation of internal wiring working at voltages > 4 kV or leaving an internal fire enclosure, or located within the areas mentioned in Table 21, comply with G.2 | < 4 kV | N/A |
| 20.2.4 | Material of printed circuit boards on which the available power exceeds 15 W at a voltage between 50 V and 400 V (peak) a.c. or d.c. meets V-1 or better to IEC 60695-11-10, unless used in a fire enclosure | U < 37 DC | P |
| | Material of printed circuit boards on which the available power exceeds 15 W at a voltage >400 V (peak) a.c. or d.c. meets V-0 to IEC 60695-11-10. | | N/A |
| 20.2.5 | Components and parts not covered by 20.1.1, 20.1.2 and 20.1.3 (other than fire enclosures) mounted nearer to a potential ignition source than the distances in Table 21 comply with the relevant flammability category in Table 21 | (see appended table) | N/A |
| | Components and parts as above but shielded from a potential ignition source, with the barrier area in accordance with Table 21 and fig. 13 | | N/A |
| | Apparatus with voltages >4kV under normal operating conditions and distances to the enclosure exceed those specified Table 21, flammability classification HB40 or better is required for the enclosure | < 4 kV | N/A |

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|-------------|--|-----------------|------------|
| Clause | Requirement + Test | Result - Remark | Verdict |
| 20.3 | Fire enclosure | | N/A |
| 20.3.1 | Potential ignition sources with open circuit voltage > 4 kV (peak) a.c. or d.c. contained in a fire enclosure to V-1 | < 4 kV | N/A |
| 20.3.2 | Internal fire enclosures with openings not exceeding 1 mm in width and with openings for wires completely filled | | N/A |
| 20.3.3 | Requirements of 20.2.1 and 20.2.2 met by an internal fire enclosure | | N/A |

| | | | |
|----------------|--|--|-----|
| ANNEX A | ADDITIONAL REQUIREMENTS FOR APPARATUS WITH PROTECTION AGAINST SPLASHING WATER | | N/A |
| A.5 | Marking and instructions | | N/A |
| A.5.1 | A.5.2 i) Marked with at least IPX4 (IEC 60529) 5.5.2 a) does not apply | | N/A |
| A.10 | Insulation requirements | | N/A |
| A.10.3 | Splash and humidity treatment | | N/A |
| A.10.3.1 | The enclosure provide adequate protection against splashing water | | N/A |
| A.10.3.2 | Complies with 10.3,duration of the test is 168h | | N/A |

| | | | |
|----------------|--|--|-----|
| ANNEX B | APPARATUS TO BE CONNECTED TO TELECOMMUNICATION THE TELECOMMUNICATION NETWORKS | | N/A |
| | Complies with IEC 62151 clause 1 | | N/A |
| | Complies with IEC 62151 clause 2 | | N/A |
| | Complies with IEC 62151 clause 3 modified | | N/A |
| | Complies with IEC 62151 clause 4 modified | | N/A |
| | Complies with IEC 62151 cause 5 modified | | N/A |
| | Complies with IEC 62151 clause 6 | | N/A |
| | Complies with IEC 62151 clause 7 | | N/A |
| | Complies with IEC 62151 annex A, B and C | | N/A |

| | | | |
|----------------|---|--|-----|
| ANNEX L | ADDITIONAL REQUIREMENTS FOR ELECTRONIC FLASH APPARATUS FOR PHOTOGRAPHIC PURPOSES | | N/A |
| L.5 | Marking and instructions | | N/A |
| L.5.5.1 | Instructions for battery chargers and Supply apparatus indicating type or model number of flash apparatus with which it is to be used | | N/A |
| | Instructions for flash apparatus indicating type or model number of battery chargers or Supply apparatus with which it is to be used | | N/A |

| IEC 60065 | | | |
|-------------|--|-----------------|---------|
| Clause | Requirement + Test | Result - Remark | Verdict |
| L.7 | Heating under normal operating conditions | | N/A |
| L.7.1.6 | Lithium batteries meet permissible temp rise in Table 3 | | N/A |
| L.9 | Electric shock hazard under normal operating conditions | | N/A |
| L. 9.1.1.1 | Terminals for connection to synchroniser not hazardous live | | N/A |
| L.14 | Components | | N/A |
| L.14.6.7 | Mains switch characteristics appropriate to its function under normal conditions | | N/A |

| 7.1 | | | | | | | | TABLE: Heating Test | | | | P |
|--------------------------------|--------------------|----|--------------------|--------------------|----------------------|----------------------|-------------------------------------|---------------------|--|--|--|---|
| Ambient (°C) | | | | | | | | -- | | | | — |
| Loudspeaker impedance (Ω)..... | | | | | | | | -- | | | | — |
| Cond. | U _n (V) | Hz | I _n (A) | P _n (W) | U _{out} (V) | P _{out} (W) | Operating Condition / Status | | | | | |
| 1 | 264 | 50 | | | | | Normal usage | | | | | |
| 2 | 198 | 50 | 0.080 | 13.69 | | | Normal usage | | | | | |
| 3 | 240 | 50 | 0.098 | 19.05 | | | Normal usage | | | | | |
| 4 | 240 | 50 | 0.012 | 1.80 | | | Short circuiting +3.3V/ 10mA Output | | | | | |
| 5 | 240 | 50 | 0.138 | 30.21 | | | Overload +20V | | | | | |
| Test condition No. | | | | No.1 | No.2 | No.3 | 1, 2, 3 | | | | | |
| Thermocouple Locations | | | | dT (K) | dT (K) | dT (K) | dT (K) limit | | | | | |
| Appliance inlet | | | | 13.9 | 8.7 | 6.8 | 45 | | | | | |
| Mains filter | | | | 17.3 | 10.6 | 8.4 | 45 | | | | | |
| Mains transformer (FL 14/18) | | | | 48.7 | 30.8 | 20.4 | 75 *) | | | | | |
| Mains transformer (B1501083) | | | | 31.8 | 18.7 | 16.3 | 75 *) | | | | | |
| Relay | | | | 29.0 | 17.3 | 14.9 | 60 | | | | | |
| PCB near rectifier | | | | 30.7 | 21.4 | 12.6 | 45 | | | | | |
| PCB near mains transformer | | | | 30.4 | 19.1 | 12.1 | 45 | | | | | |
| Front side near DIP switch | | | | 13.7 | 8.6 | 6.9 | 40 | | | | | |
| Top side | | | | 14.6 | 8.8 | 7.4 | 40 | | | | | |
| Bottom side | | | | 15.8 | 9.7 | 7.9 | 40 | | | | | |
| Ambient / °C | | | | 28.3 | 28.1 | 26.2 | | | | | | |
| | | | | | | | | | | | | |
| Test condition No. | | | | No.4 | No.5 | No. | 4, 5 | | | | | |
| Thermocouple Locations | | | | dT (K) | dT (K) | dT (K) | dT (K) limit | | | | | |
| Appliance inlet | | | | 4.2 | 25.2 | | 100 | | | | | |
| Mains filter | | | | 5.8 | 30.5 | | 100 | | | | | |
| Mains transformer (FL 14/18) | | | | 6.1 | 87.9 | | 140 *) | | | | | |

| IEC 60065 | | | | |
|---|--------------------|------|-----------------|---------------|
| Clause | Requirement + Test | | Result - Remark | Verdict |
| Mains transformer (B1501083) | 19.2 | 50.6 | | 140 *) |
| Relay | 13.5 | 43.6 | | 100 |
| PCB near rectifier | 8.3 | 52.5 | | 100 |
| PCB near mains transformer | 6.3 | 56.9 | | 100 |
| Front side near DIP switch | 3.9 | 23.6 | | 65 |
| Top side | 4.1 | 27.6 | | 65 |
| Bottom side | 4.5 | 28.5 | | 65 |
| Ambient / °C | 24.6 | 25.5 | | |
| Supplementary information: *) Thermocouple method used (temperature limit reduced by 10 K). | | | | |

| TABLE: Heating test, resistance method | | | | | | N/A |
|---|--------------------|--------------------|--------|-------------|------------------|-----|
| Test condition No. : | | | | | | — |
| Ambient, t ₁ (°C)..... : | | | | | | — |
| Ambient, t ₂ (°C)..... : | | | | | | — |
| Temperature rise of winding | R ₁ (Ω) | R ₂ (Ω) | ΔT (K) | Max. dT (K) | Insulation class | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| Supplementary information: *) Thermocouple method used (temperature limit reduced by 10 K). | | | | | | |

| 7.2 | TABLE: Heat Resistance of Insulating Materials | | | N/A |
|-----------------------|--|---------------------------|----------------------|-----|
| Temperature T of part | T - normal conditions (°C) | T - fault conditions (°C) | Min T softening (°C) | |
| | | | | |
| | | | | |
| | | | | |

| 10.4 | TABLE: Dielectric Strength | | P |
|--|----------------------------|----------------------------|--------------------------------|
| Test voltage applied between: | | Test potential applied (V) | Breakdown / flashover (Yes/No) |
| Between mains poles (primary fuse disconnected) | | 1500 | No |
| Between parts separated by basic or supplementary insulation | | 1500 | No |
| Between parts separated by double or reinforced insulation | | -- | -- |
| Supplementary information: | | | |

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

| 10.4 | TABLE: Insulation Resistance Measurements | | P |
|--|---|--------|-----------------|
| Insulation resistance R between: | | R (MΩ) | Required R (MΩ) |
| Between mains poles (primary fuse disconnected) | | >500 | 2 |
| Between parts separated by basic or supplementary insulation | | >500 | 2 |
| Between parts separated by double or reinforced insulation | | -- | 4 |
| Supplementary information: | | | |

| 11 | TABLE: Fault Conditions | | | P |
|---|----------------------------------|-------|--------------------|--|
| No. | Component | Fault | dT (K) / Component | Test conditions, test duration, test result |
| 1 | Output socket +20V ->GND | SC | Rever table below | I _{max} = 1.7A, secondary fuse (400mA) immediately cut |
| 2 | Output socket -20V ->GND | SC | Rever table below | I _{max} = 1.7A, secondary fuse (400mA) immediately cut |
| 3 | Output socket +3.3V - >GND | SC | Rever table below | I _{max} = 220mA, power source is a fail safe transformer |
| U _u = 198 V; F = 50 Hz; J _u = 0.080 A; P _n = 13.69 W | | | | |
| 4 | Output socket +20V ->GND | SC | Rever table below | I _{max} = 1.4A, secondary fuse (400mA) immediately cut |
| 5 | Output socket -20V ->GND | SC | Rever table below | I _{max} = 1.4A, secondary fuse (400mA) immediately cut |
| 6 | Output socket +3.3V - >GND | SC | Rever table below | I = 189 mA, power source is a fail safe transformer |
| 7 | Output socket +20 ->GND | OVL | Rever table below | I = 0.84A |
| Supplementary information: | | | | |

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|--|--|----------------------|----------------|----------------------|---------------|----------|
| Clause | Requirement + Test | | | Result - Remark | | Verdict |
| 13 | TABLE: Clearance And Creepage Distance Measurements | | | | | P |
| Rated supply voltage: | 264V | Pollution degree.. : | II | Material Group | IIIa/IIIb | |
| 2 N force on internal parts applied: | | | | | | |
| 30 N force on outside of conductive enclosure applied: | | | | | | |
| clearance and creepage distance at/of: | Working voltage (V) | | Clearance (mm) | | Creepage (mm) | |
| | U peak | U r.m.s. | Required | Measured | required | Measured |
| Primary (ac) to Earth (B) | 264 | 373 | 2.0 | 3.2 | 2.7 | 3.2 |
| Primary (+dc) to Earth max (B) | -- | | | | | |
| Primary (-dc) to Earth max (B) | -- | | | | | |
| Across mains fuse L/N (B) | 264 | 373 | 2.0 | 3.3 | 2.7 | 3.3 |
| Across primary directly connected to the mains (B) | 264 | 373 | 2.0 | >3.0 | 2.7 | >3.0 |
| Hazardous live secondary to Earth (B) | -- | -- | | | | |
| Optocoupler input to output (R) | -- | -- | | | | |
| Primary to accessible conductive parts (R) | | | | | | |
| Hazardous live secondary to non-hazardous live secondary (R) | | | | | | |
| Hazardous live secondary to unearthed conductive enclosure (R) | | | | | | |
| Supplementary information: | | | | | | |

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|--|---|---------------------------------|---|--------------------|-------------------------------------|
| Clause | Requirement + Test | | | Result - Remark | Verdict |
| 14 | TABLE: Critical components information | | | | P |
| Object / part No. | Manufacturer/ trademark | Type / model | Technical data | Standard | Mark(s) of conformity ¹⁾ |
| Appliance inlet, J1 | Schurter | GSF1.2202.03 1 | 10A 250V | IEC 60320 | VDE |
| - Description: | Mainsfilter with integrated fuses | | | | |
| Fuses (primary) | ESKA | | T200H 250V | IEC 127 | SEMKO |
| Fuses (secondary) | ESKA | | T400L 250 | IEC 127 | SEMKO |
| Mains filter (PCB mounting), U8 | Schurter | FPP2-25-0.6A-13P (5500.2000) | 250Av 0.6A | IEC 60939 | VDE, UL |
| Mains transformer, TR1 (Fail Safe Typ) | Block | B 1501083 | 0.35 VA, 2 x 115 V, 5V 70 mA, 50/60 Hz, Ta 70°C | EN 60742, VDE 0551 | VDE, UL |
| Mains transformer, TR2 | Block | FL 14/18 | 14 VA, 2 x 115 V, 2 x 18V 0.4A, 50/60 Hz, Ta 40°C | EN 61558, VDE 0570 | VDE, UL |
| Relay, U3 | TAKAMISAWA | JS-6MN-KT or JS-6N-K | 250 V, 8A, | | VDE, UL |
| PCB | Various | ECO-PS-14VA-SWB-R02 | Thickness 1.6mm V-1 105°C | UL746 | UL |
| Sub D connector J3 | CONEC | 164A16769X | 9-pol, 90 ° | UL 94 V-0 | |
| Supplementary information: ¹⁾ Provided evidence ensures the agreed level of compliance. See OD-CB2039. | | | | | |

List of test equipment used:

A completed list of used test equipment shall be provided in the Test Reports when a Manufacturer Testing Laboratory according to TMP/CTF stage 1 or WMT/CTF stage 2 procedure has been used.

Note: This page may be removed when TMP/CTF stage 1 or WMT/CTF stage 2 are not used. See also clause 4.8 in OD 2020 for more details.

| Clause | Measurement / testing | Testing / measuring equipment / material used, (Equipment ID) | Range used | Last Calibration date | Calibration due date |
|--------|-------------------------------|---|------------------|---------------------------|---------------------------|
| 5 | Input rating | Power source, Chroma 6460 | 02-03/20-12-002 | 18.02.2017 (verification) | 18.02.2017 (verification) |
| 5 | Input rating | Power meter, Yokogawa WT210 | 02-03/32-12-001 | 14.07.2015 | 14.07.2016 |
| 7 | Heating | Power source, Chroma 6460 | 02-03/20-12-002 | 18.02.2017 (verification) | 18.02.2017 (verification) |
| 7 | Heating | Temp. Data logger, Delphin TopMessage | 02-03/38-05-002 | 23.09.2015 | 23.09.2016 |
| 7 | Heating | DMM, Gossen MH29S | 02-03/32-08-002 | 07.10.2015 | 07.10.2016 |
| 9 | Electric Shock | Power source, Chroma 6460 | 02-03/20-12-002 | 18.02.2017 (verification) | 18.02.2017 (verification) |
| 9 | Electric Shock | Scope, R&S HMO3004 | 01-03/13-16-001 | 15.02.2016 | 15.02.2017 |
| 9 | Electric Shock | Voltage probe, TESTEC x100 | 01-03/50-14-002 | 19.05.2017 | 19.05.2016 |
| 9 | Electric Shock | Touch current device, BSM-500KK | 02-03/32-13-003 | 03.08.2016 | 03.08.2016 |
| 9 | Electric Shock | Testfinger jointed | 01-03/50-05-016 | 23.02.2016 | 23.02.2017 |
| 9 | Electric Shock | Test Pin | 02-03/34-09-001 | 23.02.2016 | 23.02.2017 |
| 10 | Isolation requirements | Compact Tester, Elabo 91-4A | 01-03/30-05-008 | 09.11.2015 | 09.11.2016 |
| 12 | Mechanical strength | Steel ball, 50mm | 02-03/34--05-022 | 03.11.2014 | 03.11.2019 |
| 12 | Mechanical strength | Force meter, 500N | 02-03/47-07-001 | 07.06.2016 | 07.06.2017 |
| 13 | Clearance & Creepage distance | Vernier caliper, DigiMet | 01-03/50-07-001 | 05.08.2015 | 05.08.2016 |
| 13 | Clearance & Creepage distance | Micoscope, Achromat x 10 | 02-03/50-05-023 | 23.02.2016 | 23.02.2017 |
| 15 | Terminals | PE-Tester, Elabo 90-2C | 01-03/30-05-006 | 20.08.2015 | 20.08.2016 |
| 15 | Terminals | Current probe, Fluke 337 | 02-03/32-08-001 | 13.07.2015 | 13.07.2016 |
| 17 | Mechanical strength | Torque meter, FTD100CN2-S | 01-03/34-12-006 | 15.10.2015 | 15.10.2016 |
| | | | | | |