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TEST REPORT IEC 60950-1 Information technology equipment – Safety – Part 1: General requirements		
Report Number : UNI2015122413SR-01 Date of issue : 2015-12-22 Total number of pages : 42		
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Applicant's name : TIMETEC COMPUTING SDN BHD Address : No.6, 8 & 10 Jalan BK 3/2, Bandar Kinrara 47180 Puchong, Selangor, Malaysia.		
Test specification: Standard : IEC 60950-1:2005+A1:2009+A2:2013 Test procedure : IEC test report 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: The test results presented in this report relate only to the object tested.		
Test item description	KEYLOCK	
Trade Mark	FINGERTEC	
Manufacturer	Same as applicant	
Model/Type reference	7700	
Ratings	Input: 12VDC , 1.5A	



Testing procedure and testing location:	
<input checked="" type="checkbox"/>	Testing Laboratory:
Testing location/ address	
<input type="checkbox"/>	Associated Testing Laboratory:
Testing location/ address	
Tested by (name + signature).....	
Approved by (name + signature).....	
Testing procedure: TMP/CTF Stage 1:	
Testing location/ address	
Tested by (name + signature).....	
Approved by (name + signature).....	
Testing procedure: WMT/CTF Stage 2:	
Testing location/ address	
Tested by (name + signature).....	
Witnessed by (name + signature)	
Approved by (name + signature).....	
Testing procedure: SMT/CTF Stage 3 or 4:	
Testing location/ address	
Tested by (name + signature).....	
Witnessed by (name + signature)	
Approved by (name + signature).....	
Supervised by (name + signature)	

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<p>List of Attachments (including a total number of pages in each attachment): 1, Photo attachments.(3 pages)</p>											
<p>Summary of testing:</p>											
<p>Tests performed (name of test and test clause):</p> <table border="0"> <tr> <td>1</td> <td>General</td> </tr> <tr> <td>2</td> <td>Protection from hazards</td> </tr> <tr> <td>3</td> <td>Wiring, connections and supply</td> </tr> <tr> <td>4</td> <td>Physical requirements</td> </tr> <tr> <td>5</td> <td>Abnormal operating and fault conditions</td> </tr> </table>	1	General	2	Protection from hazards	3	Wiring, connections and supply	4	Physical requirements	5	Abnormal operating and fault conditions	<p>Testing location: Laboratory of Shenzhen United Testing Technology Co., Ltd. 5/F., Building 7, Xinyuan Industrial Park, Xili, Nanshan District, Shenzhen, Guangdong, China</p>
1	General										
2	Protection from hazards										
3	Wiring, connections and supply										
4	Physical requirements										
5	Abnormal operating and fault conditions										
<p>Summary of compliance with National Differences: List of countries addressed Saudi Arabia national differences. (No differences)</p> <p><input checked="" type="checkbox"/> The product fulfils the requirements of <u>IEC 60950-1:2005+A1:2009+A2:2013.</u></p>											

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Copy of marking plate:
The artwork below may be only a draft.

FINGERTEC
KEYLOCK
Model: 7700
Input: 12VDC, 1.5A
Made in Malaysia

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Test item particulars.....:	
Equipment mobility.....:	<input type="checkbox"/> movable <input type="checkbox"/> hand-held <input type="checkbox"/> transportable <input checked="" type="checkbox"/> stationary <input type="checkbox"/> for building-in <input type="checkbox"/> direct plug-in
Connection to the mains.....:	<input type="checkbox"/> pluggable equipment <input type="checkbox"/> type A <input type="checkbox"/> type B <input type="checkbox"/> permanent connection <input type="checkbox"/> detachable power supply cord <input type="checkbox"/> non-detachable power supply cord <input checked="" type="checkbox"/> not directly connected to the mains
Operating condition.....:	<input checked="" type="checkbox"/> continuous <input type="checkbox"/> rated operating / resting time:
Access location	<input checked="" type="checkbox"/> operator accessible <input type="checkbox"/> restricted access location
Over voltage category (OVC)	<input type="checkbox"/> OVC I <input checked="" type="checkbox"/> OVC II <input type="checkbox"/> OVC III <input type="checkbox"/> OVC IV <input type="checkbox"/> other:
Mains supply tolerance (%) or absolute mains supply values	N/A
Tested for IT power systems	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
IT testing, phase-phase voltage (V)	N/A
Class of equipment	<input type="checkbox"/> Class I <input type="checkbox"/> Class II <input checked="" type="checkbox"/> Class III <input type="checkbox"/> Not classified
Considered current rating of protective device as part of the building installation (A)	16A
Pollution degree (PD)	<input type="checkbox"/> PD 1 <input checked="" type="checkbox"/> PD 2 <input type="checkbox"/> PD 3
IP protection class	IP20
Altitude during operation (m)	Up to 2000m
Altitude of test laboratory (m)	Below 2000m
Mass of equipment (kg)	Approx.3.253kg

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	2015-12-08
Date (s) of performance of tests	2015-12-09 to 2015-12-21

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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. The related applicable OSM decisions have been considered and their requirements found fulfilled. Determination of the test result includes consideration of measurement uncertainty from the test equipment and methods.</p>	
Manufacturer's Declaration per sub-clause 4.2.5 of IEC 60950-1:	
<p>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</p>	<p><input type="checkbox"/> Yes <input checked="" type="checkbox"/> Not applicable</p>
When differences exist; they shall be identified in the General product information section.	
<p>Name and address of factory (ies) : Same as applicant</p>	
General product information:	
<p>The product is Class III KEYLOCK intended to be in indoor use, electronic components mounted on PCB, External enclosure is metal and plastic material of min.V-1 grade, secured by screw Maximum recommended ambient (T_{mra}): 40°C</p>	
Abbreviations used in the report:	
<ul style="list-style-type: none"> - normal conditions N.C. - functional insulation OP - double insulation DI - between parts of opposite polarity BOP 	<ul style="list-style-type: none"> - single fault conditions S.F.C - basic insulation BI - supplementary insulation SI - reinforced insulation RI
Indicate used abbreviations (if any)	

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IEC 60950-1			
Clause	Requirement + Test	Result - Remark	Verdict
1	GENERAL		P
1.5	Components		P
1.5.1	General		P
	Comply with IEC 60950-1 or relevant component standard	(see appended tables 1.5.1)	P
1.5.2	Evaluation and testing of components	<p>Certified components are used in accordance with their ratings, certifications and they comply with applicable parts of this standard.</p> <p>Components not certified are used in accordance with their ratings and they comply with applicable parts of IEC 60950-1 and the relevant component standard.</p> <p>Components, for which no relevant IEC-standard exists, have been tested under the conditions occurring in the equipment, using applicable parts of IEC 60950-1.</p>	P
1.5.3	Thermal controls	No thermal control.	N/A
1.5.4	Transformers	Class III equipment	N/A
1.5.5	Interconnecting cables		P
1.5.6	Capacitors bridging insulation		N/A
1.5.7	Resistors bridging insulation		N/A
1.5.7.1	Resistors bridging functional, basic or supplementary insulation		N/A
1.5.7.2	Resistors bridging double or reinforced insulation between a.c. mains and other circuits		N/A
1.5.7.3	Resistors bridging double or reinforced insulation between a.c. mains and antenna or coaxial cable		N/A
1.5.8	Components in equipment for IT power systems		N/A
1.5.9	Surge suppressors		N/A
1.5.9.1	General		N/A
1.5.9.2	Protection of VDRs		N/A
1.5.9.3	Bridging of functional insulation by a VDR		N/A
1.5.9.4	Bridging of basic insulation by a VDR		N/A
1.5.9.5	Bridging of supplementary, double or reinforced insulation by a VDR		N/A

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IEC 60950-1			
Clause	Requirement + Test	Result - Remark	Verdict
1.6	Power interface		P
1.6.1	AC power distribution systems	Not directly connected to the mains	N/A
1.6.2	Input current	(see appended table 1.6.2)	P
1.6.3	Voltage limit of hand-held equipment	The equipment is not handheld equipment	N/A
1.6.4	Neutral conductor		N/A
1.7	Marking and instructions		P
1.7.1	Power rating and identification markings	The required marking is located on the outside surface of the equipment.	P
1.7.1.1	Power rating marking	See below	P
	Multiple mains supply connections.....:	Only one mains supply connections.	N/A
	Rated voltage(s) or voltage range(s) (V)	12V	P
	Symbol for nature of supply, for d.c. only	DC	P
	Rated frequency or rated frequency range (Hz)		N/A
	Rated current (mA or A)	1.5A	P
1.7.1.2	Identification markings	See below	P
	Manufacturer's name or trade-mark or identification mark	TIMETEC COMPUTING SDN BHD	P
	Model identification or type reference	7700	P
	Symbol for Class II equipment only		N/A
	Other markings and symbols		N/A
1.7.1.3	Use of graphical symbols		N/A
1.7.2	Safety instructions and marking	See below.	P
1.7.2.1	General		P
1.7.2.2	Disconnect devices	Not directly connected to the mains	N/A
1.7.2.3	Overcurrent protective device		N/A
1.7.2.4	IT power distribution systems		N/A
1.7.2.5	Operator access with a tool		N/A
1.7.2.6	Ozone	The equipment does not produce Ozone.	N/A
1.7.3	Short duty cycles	The equipment is designed for continuous operation.	N/A
1.7.4	Supply voltage adjustment	Full range voltage design, no Voltage adjustment.	N/A

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Clause	Requirement + Test	Result - Remark	Verdict
	Methods and means of adjustment; reference to installation instructions		N/A
1.7.5	Power outlets on the equipment	No standard power outlet.	N/A
1.7.6	Fuse identification (marking, special fusing characteristics, cross-reference)		N/A
1.7.7	Wiring terminals	No such terminals	N/A
1.7.7.1	Protective earthing and bonding terminals	Class III equipment	N/A
1.7.7.2	Terminals for a.c. mains supply conductors	The equipment is not permanently connected or provided with a non-detachable power supply cord.	N/A
1.7.7.3	Terminals for d.c. mains supply conductors	The equipment is not supplied from d.c mains.	N/A
1.7.8	Controls and indicators	See below	N/A
1.7.8.1	Identification, location and marking	No controls affecting safety	N/A
1.7.8.2	Colours	No indicators with colours where safety is involved	N/A
1.7.8.3	Symbols according to IEC 60417.....		N/A
1.7.8.4	Markings using figures		N/A
1.7.9	Isolation of multiple power sources	Only one connection supplying hazardous voltages and energy levels to the equipment.	N/A
1.7.10	Thermostats and other regulating devices	No thermostats or other regulating devices.	N/A
1.7.11	Durability	The marking plate was subjected to the permanence of marking test. The marking plate was rubbed with cloth soaked with water for 15s and then again for 15s with the cloth soaked with petroleum spirit. After this test there was no damage to the marking plate. The marking on the label did not fade.	P
1.7.12	Removable parts		N/A
1.7.13	Replaceable batteries		N/A
	Language(s)		—
1.7.14	Equipment for restricted access locations.....		N/A
2	PROTECTION FROM HAZARDS		P

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

2.1	Protection from electric shock and energy hazards		P
2.1.1	Protection in operator access areas		P
2.1.1.1	Access to energized parts	Class III equipment only	N/A
	Test by inspection		N/A
	Test with test finger (Figure 2A)		N/A
	Test with test pin (Figure 2B)		N/A
	Test with test probe (Figure 2C)	No TNV circuits within the equipment.	N/A
2.1.1.2	Battery compartments	No TNV circuits within the equipment	N/A
2.1.1.3	Access to ELV wiring	No ELV circuit	N/A
	Working voltage (V _{peak} or V _{rms}); minimum distance through insulation (mm)	(see appended tables 2.10.2 and 2.10.5)	—
2.1.1.4	Access to hazardous voltage circuit wiring	No internal wiring at hazardous voltage circuit accessible to the operator.	N/A
2.1.1.5	Energy hazards	No energy hazard in operator access area. Checked by means of the test finger.	P
2.1.1.6	Manual controls	No conductive shafts of operating knobs, handles, levers and the like in operator access areas.	N/A
2.1.1.7	Discharge of capacitors in equipment		N/A
	Measured voltage (V); time-constant (s)		—
2.1.1.8	Energy hazards – d.c. mains supply	Not connected to DC mains supply	N/A
	a) Capacitor connected to the d.c. mains supply ..:		N/A
	b) Internal battery connected to the d.c. mains supply :		N/A
2.1.1.9	Audio amplifiers		N/A
2.1.2	Protection in service access areas		N/A
2.1.3	Protection in restricted access locations		N/A

2.2	SELV circuits		P
2.2.1	General requirements	SELV limits are not exceeded under normal condition and after a single fault.	P
2.2.2	Voltages under normal conditions (V)	12VDC	P
2.2.3	Voltages under fault conditions (V)	12VDC	P

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Clause	Requirement + Test	Result - Remark	Verdict

2.2.4	Connection of SELV circuits to other circuits	SELV circuits are only connected to other SELV circuits.	P
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2.3	TNV circuits		N/A
2.3.1	Limits	No TNV circuits within the equipment.	N/A
	Type of TNV circuits		—
2.3.2	Separation from other circuits and from accessible parts		N/A
2.3.2.1	General requirements		N/A
2.3.2.2	Protection by basic insulation		N/A
2.3.2.3	Protection by earthing		N/A
2.3.2.4	Protection by other constructions		N/A
2.3.3	Separation from hazardous voltages		N/A
	Insulation employed.....		—
2.3.4	Connection of TNV circuits to other circuits		N/A
	Insulation employed.....		—
2.3.5	Test for operating voltages generated externally		N/A

2.4	Limited current circuits		N/A
2.4.1	General requirements		N/A
2.4.2	Limit values		N/A
	Frequency (Hz).....		—
	Measured current (mA).....		—
	Measured voltage (V)		—
	Measured circuit capacitance (nF or μF).....		—
2.4.3	Connection of limited current circuits to other circuits		N/A

2.5	Limited power sources		N/A
	a) Inherently limited output		N/A
	b) Impedance limited output	(see appended table 2.5)	N/A
	c) Regulating network or IC current limiter, limits output under normal operating and single fault condition		N/A
	Use of integrated circuit (IC) current limiters	(See Annex CC)	N/A
	d) Overcurrent protective device limited output	(see appended table 2.5)	N/A

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Clause	Requirement + Test	Result - Remark	Verdict
	Max. output voltage (V), max. output current (A), max. apparent power (VA)..... :		—
	Current rating of overcurrent protective device (A) .. :		—

2.6	Provisions for earthing and bonding		N/A
2.6.1	Protective earthing	Class III equipment	N/A
2.6.2	Functional earthing		N/A
	Use of symbol for functional earthing		—
2.6.3	Protective earthing and protective bonding conductors		N/A
2.6.3.1	General		N/A
2.6.3.2	Size of protective earthing conductors		N/A
	Rated current (A), cross-sectional area (mm ²), AWG		—
2.6.3.3	Size of protective bonding conductors		N/A
	Rated current (A), cross-sectional area (mm ²), AWG		—
	Protective current rating (A), cross-sectional area (mm ²), AWG		—
2.6.3.4	Resistance of earthing conductors and their terminations; resistance (Ω), voltage drop (V), test current (A), duration (min)		N/A
2.6.3.5	Colour of insulation.....		N/A
2.6.4	Terminals		N/A
2.6.4.1	General		N/A
2.6.4.2	Protective earthing and bonding terminals		N/A
	Rated current (A), type, nominal thread diameter (mm)		—
2.6.4.3	Separation of the protective earthing conductor from protective bonding conductors		N/A
2.6.5	Integrity of protective earthing		N/A
2.6.5.1	Interconnection of equipment		N/A
2.6.5.2	Components in protective earthing conductors and protective bonding conductors		N/A
2.6.5.3	Disconnection of protective earth		N/A
2.6.5.4	Parts that can be removed by an operator		N/A
2.6.5.5	Parts removed during servicing		N/A
2.6.5.6	Corrosion resistance		N/A
2.6.5.7	Screws for protective bonding		N/A

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Clause	Requirement + Test	Result - Remark	Verdict

2.6.5.8	Reliance on telecommunication network or cable distribution system		N/A
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2.7	Overcurrent and earth fault protection in primary circuits		N/A
2.7.1	Basic requirements	Class III equipment	N/A
	Instructions when protection relies on building installation		N/A
2.7.2	Faults not simulated in 5.3.7		—
2.7.3	Short-circuit backup protection		N/A
2.7.4	Number and location of protective devices		N/A
2.7.5	Protection by several devices		N/A
2.7.6	Warning to service personnel		N/A

2.8	Safety interlocks		N/A
2.8.1	General principles	No safety interlocks or similar devices within the equipment	N/A
2.8.2	Protection requirements		N/A
2.8.3	Inadvertent reactivation		N/A
2.8.4	Fail-safe operation		N/A
	Protection against extreme hazard		N/A
2.8.5	Moving parts		N/A
2.8.6	Overriding		N/A
2.8.7	Switches, relays and their related circuits		N/A
2.8.7.1	Separation distances for contact gaps and their related circuits (mm)		N/A
2.8.7.2	Overload test		N/A
2.8.7.3	Endurance test		N/A
2.8.7.4	Electric strength test	(see appended table 5.2)	N/A
2.8.8	Mechanical actuators		N/A

2.9	Electrical insulation		P
2.9.1	Properties of insulating materials	Neither natural rubber, materials containing asbestons nor hygroscopic materials are used as insulation. No driving belts or coupling used.	P
2.9.2	Humidity conditioning	Carried out for 120 hrs.	P
	Relative humidity (%), temperature (°C)	95%, 40°C (according to client's requirement)	—

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Clause	Requirement + Test	Result - Remark	Verdict
2.9.3	Grade of insulation	Adequate levels of safety insulation were provided and maintained to comply with the requirements of this standard	P
2.9.4	Separation from hazardous voltages	See below	N/A
	Method(s) used	Method 1 used	—

2.10	Clearances, creepage distances and distances through insulation		N/A
2.10.1	General	See below.	—
2.10.1.1	Frequency	Considered.	N/A
2.10.1.2	Pollution degrees	Pollution Degree 2.	N/A
2.10.1.3	Reduced values for functional insulation	The is no requirement for functional insulation	N/A
2.10.1.4	Intervening unconnected conductive parts	Considered	—
2.10.1.5	Insulation with varying dimensions	No such transformer used.	N/A
2.10.1.6	Special separation requirements	Special separation is not used.	N/A
2.10.1.7	Insulation in circuits generating starting pulses	The circuit will not generate starting pulse.	N/A
2.10.2	Determination of working voltage		N/A
2.10.2.1	General		—
2.10.2.2	RMS working voltage		N/A
2.10.2.3	Peak working voltage		N/A
2.10.3	Clearances		N/A
2.10.3.1	General		—
2.10.3.2	Mains transient voltages		N/A
	a) AC mains supply	Not directly connected to the a c mains	N/A
	b) Earthed d.c. mains supplies	Not directly connected to the d c mains	N/A
	c) Unearthed d.c. mains supplies	Not directly connected to the d c mains	N/A
	d) Battery operation		N/A
2.10.3.3	Clearances in primary circuits	(see appended table 2.10.3 and 2.10.4)	N/A
2.10.3.4	Clearances in secondary circuits	Only the functional insulation in secondary circuits complied with clause 5.3.4.	N/A
2.10.3.5	Clearances in circuits having starting pulses		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
2.10.3.6	Transients from a.c. mains supply	Not connected to a c mains supply.	N/A
2.10.3.7	Transients from d.c. mains supply	Not connected to d.c mains supply.	N/A
2.10.3.8	Transients from telecommunication networks and cable distribution systems	Not connected to telecommunication networks and cable distribution systems.	N/A
2.10.3.9	Measurement of transient voltage levels	See below.	—
	a) Transients from a mains supply	Measurement not relevant.	N/A
	For an a.c. mains supply		N/A
	For a d.c. mains supply		N/A
	b) Transients from a telecommunication network :	Not connected to telecommunication networks.	N/A
2.10.4	Creepage distances	See below.	N/A
2.10.4.1	General	Considered.	N/A
2.10.4.2	Material group and comparative tracking index	See below.	N/A
	CTI tests	Material group IIIb is assumed to be used	—
2.10.4.3	Minimum creepage distances	(see appended table 2.10.3 and 2.10.4)	N/A
2.10.5	Solid insulation	See below.	N/A
2.10.5.1	General	Considered.	N/A
2.10.5.2	Distances through insulation	(see appended table 2.10.5)	N/A
2.10.5.3	Insulating compound as solid insulation		N/A
2.10.5.4	Semiconductor devices		N/A
2.10.5.5.	Cemented joints	(see appended table 2.10.3 and 2.10.4)	N/A
2.10.5.6	Thin sheet material – General		N/A
2.10.5.7	Separable thin sheet material		N/A
	Number of layers (pcs)	2 layers (test 1 layers)	—
2.10.5.8	Non-separable thin sheet material		N/A
2.10.5.9	Thin sheet material – standard test procedure		N/A
	Electric strength test	(see appended table 2.10.5)	—
2.10.5.10	Thin sheet material – alternative test procedure		N/A
	Electric strength test	(see appended table 2.10.5)	—
2.10.5.11	Insulation in wound components		N/A
2.10.5.12	Wire in wound components		N/A
	Working voltage		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
	a) Basic insulation not under stress		N/A
	b) Basic, supplementary, reinforced insulation		N/A
	c) Compliance with Annex U		N/A
	Two wires in contact inside wound component; angle between 45° and 90°		N/A
2.10.5.13	Wire with solvent-based enamel in wound components	No wire with solvent-based enamel in wound components.	N/A
	Electric strength test	(see appended table 2.10.5)	—
	Routine test		N/A
2.10.5.14	Additional insulation in wound components		N/A
	Working voltage		N/A
	- Basic insulation not under stress		N/A
	- Supplementary, reinforced insulation		N/A
2.10.6	Construction of printed boards	See below.	N/A
2.10.6.1	Uncoated printed boards	(see appended table 2.10.3 and 2.10.4)	N/A
2.10.6.2	Coated printed boards	(see appended table 2.10.3 and 2.10.4)	N/A
2.10.6.3	Insulation between conductors on the same inner surface of a printed board	(see appended table 2.10.3 and 2.10.4)	N/A
2.10.6.4	Insulation between conductors on different layers of a printed board		N/A
	Distance through insulation	(see appended table 2.10.5)	N/A
	Number of insulation layers (pcs)		N/A
2.10.7	Component external terminations	Coatings not used over terminations to increase effective creepage and clearance distances.	N/A
2.10.8	Tests on coated printed boards and coated components	No special coating in order to reduce distance.	N/A
2.10.8.1	Sample preparation and preliminary inspection		N/A
2.10.8.2	Thermal conditioning		N/A
2.10.8.3	Electric strength test	(see appended table 5.2)	N/A
2.10.8.4	Abrasion resistance test		N/A
2.10.9	Thermal cycling		N/A
2.10.10	Test for Pollution Degree 1 environment and insulating compound		N/A
2.10.11	Tests for semiconductor devices and cemented joints		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
2.10.12	Enclosed and sealed parts		N/A
3	WIRING, CONNECTIONS AND SUPPLY		P
3.1	General		P
3.1.1	Current rating and overcurrent protection	Adequate cross sectional areas on wiring.	P
3.1.2	Protection against mechanical damage	Wireways are smooth and free from edges. Wires are adequately fixed to prevent excessive strain on wire and terminals and avoiding damage to the insulation of the conductors.	P
3.1.3	Securing of internal wiring	Internal wiring is secured against excessive strain, loosening of terminals and damage to the conductor insulation.	P
3.1.4	Insulation of conductors	Insulation on internal conductors is considered to be of adequate quality and suitable for the application	N/A
3.1.5	Beads and ceramic insulators	No beads or similar ceramic insulators on conductors.	N/A
3.1.6	Screws for electrical contact pressure		N/A
3.1.7	Insulating materials in electrical connections	No contact pressure through insulating material.	P
3.1.8	Self-tapping and spaced thread screws		N/A
3.1.9	Termination of conductors	Terminations cannot become displaced so that clearances and creepage distances can be reduced.	N/A
	10 N pull test		N/A
3.1.10	Sleeving on wiring		N/A
3.2	Connection to a mains supply		N/A
3.2.1	Means of connection	See below	N/A
3.2.1.1	Connection to an a.c. mains supply		N/A
3.2.1.2	Connection to a d.c. mains supply	The equipment is not for connection to a d.c. mains supply.	N/A
3.2.2	Multiple supply connections		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
3.2.3	Permanently connected equipment	The equipment is not intended for permanent connection to the mains.	N/A
	Number of conductors, diameter of cable and conduits (mm)		—
3.2.4	Appliance inlets	Not directly connected to the mains	N/A
3.2.5	Power supply cords		N/A
3.2.5.1	AC power supply cords		N/A
	Type		—
	Rated current (A), cross-sectional area (mm ²), AWG		—
3.2.5.2	DC power supply cords	The equipment is not for connecting to d.c. mains.	N/A
3.2.6	Cord anchorages and strain relief		N/A
	Mass of equipment (kg), pull (N)		—
	Longitudinal displacement (mm)	Longitudinal displacement less than 2mm	—
3.2.7	Protection against mechanical damage		N/A
3.2.8	Cord guards	No moving when it is intended to be operated	N/A
	Diameter or minor dimension D (mm); test mass (g)		—
	Radius of curvature of cord (mm)		—
3.2.9	Supply wiring space		N/A

3.3	Wiring terminals for connection of external conductors		N/A
3.3.1	Wiring terminals	Not directly connected to the mains	N/A
3.3.2	Connection of non-detachable power supply cords		N/A
3.3.3	Screw terminals		N/A
3.3.4	Conductor sizes to be connected		N/A
	Rated current (A), cord/cable type, cross-sectional area (mm ²)		—
3.3.5	Wiring terminal sizes		N/A
	Rated current (A), type, nominal thread diameter (mm)		—
3.3.6	Wiring terminal design		N/A
3.3.7	Grouping of wiring terminals		N/A

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Clause	Requirement + Test	Result - Remark	Verdict

3.3.8	Stranded wire		N/A
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3.4	Disconnection from the mains supply		N/A
3.4.1	General requirement		N/A
3.4.2	Disconnect devices		N/A
3.4.3	Permanently connected equipment	Not directly connected to the mains	N/A
3.4.4	Parts which remain energized		N/A
3.4.5	Switches in flexible cords		N/A
3.4.6	Number of poles – single-phase and d.c. equipment		N/A
3.4.7	Number of poles – three-phase equipment		N/A
3.4.8	Switches as disconnect devices		N/A
3.4.9	Plugs as disconnect devices		N/A
3.4.10	Interconnected equipment		N/A
3.4.11	Multiple power sources		N/A

3.5	Interconnection of equipment		P
3.5.1	General requirements	Considered.	P
3.5.2	Types of interconnection circuits	SELV circuit.	P
3.5.3	ELV circuits as interconnection circuits		N/A
3.5.4	Data ports for additional equipment		P

4	PHYSICAL REQUIREMENTS		P
4.1	Stability		N/A
	Angle of 10°		N/A
	Test force (N)		N/A

4.2	Mechanical strength		P
4.2.1	General	Complies with the requirement also after tests described below are applied.	P
	Rack-mounted equipment.	No rack-mounted equipment.	N/A
4.2.2	Steady force test, 10 N	No hazard, ref. Comment in appended table 2.10.3 – 2.10.4	P
4.2.3	Steady force test, 30 N		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
4.2.4	Steady force test, 250 N	No hazards. The test is performed at plastic enclosure.	P
4.2.5	Impact test		N/A
	Fall test		N/A
	Swing test		N/A
4.2.6	Drop test; height (mm)		N/A
4.2.7	Stress relief test	No hazardous parts in the equipment	N/A
4.2.8	Cathode ray tubes	No cathode ray tubes provided	N/A
	Picture tube separately certified		N/A
4.2.9	High pressure lamps		N/A
4.2.10	Wall or ceiling mounted equipment; force (N)	50N	P

4.3	Design and construction		P
4.3.1	Edges and corners	All edges and corners are rounded and/or smoothed.	P
4.3.2	Handles and manual controls; force (N)..... :	50N	P
4.3.3	Adjustable controls	No hazardous adjustable controls.	N/A
4.3.4	Securing of parts	No loosening of parts impairing creepage distances or clearances is likely to occur.	P
4.3.5	Connection by plugs and sockets		N/A
4.3.6	Direct plug-in equipment		N/A
	Torque		—
	Compliance with the relevant mains plug standard		N/A
4.3.7	Heating elements in earthed equipment		N/A
4.3.8	Batteries		N/A
	- Overcharging of a rechargeable battery		N/A
	- Unintentional charging of a non-rechargeable battery	(see appended table 4.3.8)	N/A
	- Reverse charging of a rechargeable battery	(see appended table 4.3.8)	N/A
	- Excessive discharging rate for any battery		N/A
4.3.9	Oil and grease	Insulation in intended use not considered to be exposed to oil or grease.	N/A
4.3.10	Dust, powders, liquids and gases	The equipment does not produce dust or use powders, liquids and gases in the equipment.	N/A

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Clause	Requirement + Test	Result - Remark	Verdict
4.3.11	Containers for liquids or gases	No container for liquids or gases used	N/A
4.3.12	Flammable liquids	The equipment does not contain flammable liquid	N/A
	Quantity of liquid (l)		N/A
	Flash point (°C)		N/A
4.3.13	Radiation		N/A
4.3.13.1	General		N/A
4.3.13.2	Ionizing radiation	The equipment does not generate ionizing radiation.	N/A
	Measured radiation (Pa/kg)		—
	Measured high-voltage (Kv)		—
	Measured focus voltage (Kv)		—
	CRT markings		—
4.3.13.3	Effect of ultraviolet (UV) radiation on materials	The equipment does not produce significant UV radiation.	N/A
	Part, property, retention after test, flammability classification		N/A
4.3.13.4	Human exposure to ultraviolet (UV) radiation	The equipment does not produce significant UV radiation.	N/A
4.3.13.5	Lasers (including laser diodes) and LEDs		N/A
4.3.13.5.1	Lasers (including laser diodes)		N/A
	Laser class		—
4.3.13.5.2	Light emitting diodes (LEDs)		—
4.3.13.6	Other types	The equipment does not generate other types of radiation.	N/A

4.4	Protection against hazardous moving parts		N/A
4.4.1	General	No hazardous moving parts within the equipment	N/A
4.4.2	Protection in operator access areas		N/A
	Household and home/office document/media shredders	(see Annex EE)	N/A
4.4.3	Protection in restricted access locations		N/A
4.4.4	Protection in service access areas		N/A
4.4.5	Protection against moving fan blades		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
4.4.5.1	General		N/A
	Not considered to cause pain or injury. A).....:		N/A
	Is considered to cause pain, not injury. B)		N/A
	Considered to cause injury. C)		N/A
4.4.5.2	Protection for users		N/A
	Use of symbol or warning		N/A
4.4.5.3	Protection for service persons		N/A
	Use of symbol or warning		N/A

4.5	Thermal requirements		P
4.5.1	General		P
4.5.2	Temperature tests		P
	Normal load condition per Annex L		—
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
4.5.5	Resistance to abnormal heat	(see appended table 4.5.5)	P

4.6	Openings in enclosures		N/A
4.6.1	Top and side openings	No openings	N/A
	Dimensions (mm)		—
4.6.2	Bottoms of fire enclosures		N/A
	Construction of the bottom, dimensions (mm) ..		—
4.6.3	Doors or covers in fire enclosures	No doors or covers in fire enclosure.	N/A
4.6.4	Openings in transportable equipment		N/A
4.6.4.1	Constructional design measures		N/A
	Dimensions (mm)		—
4.6.4.2	Evaluation measures for larger openings		N/A
4.6.4.3	Use of metallized parts		N/A
4.6.5	Adhesives for constructional purposes		N/A
	Conditioning temperature (°C), time (weeks)		—

4.7	Resistance to fire		P
4.7.1	Reducing the risk of ignition and spread of flame	Method 1 is used.	P

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Clause	Requirement + Test	Result - Remark	Verdict
	Method 1, selection and application of components wiring and materials	(see appended table 1.5.1)	P
	Method 2, application of all of simulated fault condition tests		N/A
4.7.2	Conditions for a fire enclosure	Refer below.	P
4.7.2.1	Parts requiring a fire enclosure	The fire enclosure cover all components	P
4.7.2.2	Parts not requiring a fire enclosure		N/A
4.7.3	Materials		P
4.7.3.1	General	Components and materials have adequate flammability classification. See appended table 1.5.1	P
4.7.3.2	Materials for fire enclosures	Min.V-1 for plastic fire enclosure	P
4.7.3.3	Materials for components and other parts outside fire enclosures		N/A
4.7.3.4	Materials for components and other parts inside fire enclosures	Materials inside fire enclosure are minimum V-1 material or better	P
4.7.3.5	Materials for air filter assemblies	No air filters in the equipment	N/A
4.7.3.6	Materials used in high-voltage components	No parts exceeding 4Kv	N/A

5	ELECTRICAL REQUIREMENTS AND SIMULATED ABNORMAL CONDITIONS		P
5.1	Touch current and protective conductor current		N/A
5.1.1	General		N/A
5.1.2	Configuration of equipment under test (EUT)		—
5.1.2.1	Single connection to an a.c. mains supply		N/A
5.1.2.2	Redundant multiple connections to an a.c. mains supply		N/A
5.1.2.3	Simultaneous multiple connections to an a.c. mains supply		N/A
5.1.3	Test circuit		N/A
5.1.4	Application of measuring instrument		N/A
5.1.5	Test procedure		N/A
5.1.6	Test measurements		N/A
	Supply voltage (V)		—
	Measured touch current (Ma)		—
	Max. allowed touch current (Ma)		—
	Measured protective conductor current (Ma)		—

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Clause	Requirement + Test	Result - Remark	Verdict
	Max. allowed protective conductor current (Ma) ...:		—
5.1.7	Equipment with touch current exceeding 3,5 Ma		N/A
5.1.7.1	General		N/A
5.1.7.2	Simultaneous multiple connections to the supply		N/A
5.1.8	Touch currents to telecommunication networks and cable distribution systems and from telecommunication networks	Not connected to a telecommunication network or cable distribution systems	N/A
5.1.8.1	Limitation of the touch current to a telecommunication network or to a cable distribution system		N/A
	Supply voltage (V)		—
	Measured touch current (Ma)		—
	Max. allowed touch current (Ma)		—
5.1.8.2	Summation of touch currents from telecommunication networks		N/A
	a) EUT with earthed telecommunication ports		N/A
	b) EUT whose telecommunication ports have no reference to protective earth		N/A

5.2	Electric strength		N/A
5.2.1	General	(see appended table 5.2)	N/A
5.2.2	Test procedure		N/A

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	No transformers	N/A
5.3.4	Functional insulation.....:	No requirement	N/A
5.3.5	Electromechanical components	These equipments don't have any electromechanical components	N/A
5.3.6	Audio amplifiers in ITE		N/A
5.3.7	Simulation of faults	see appended table 5.3	P
5.3.8	Unattended equipment	These equipments don't intended for unattended use	N/A
5.3.9	Compliance criteria for abnormal operating and fault conditions	See below	P

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Clause	Requirement + Test	Result - Remark	Verdict
5.3.9.1	During the tests	No fire or molten metal occurred and no deformation of enclosure during the tests.	P
5.3.9.2	After the tests	No reduction of clearance and creepage distances. Electric strength test is made on functional, supplementary and reinforced insulation.	P

6	CONNECTION TO TELECOMMUNICATION NETWORKS		N/A
6.1	Protection of telecommunication network service persons, and users of other equipment connected to the network, from hazards in the equipment		N/A
6.1.1	Protection from hazardous voltages		N/A
6.1.2	Separation of the telecommunication network from earth		N/A
6.1.2.1	Requirements	(see appended table 5.2)	N/A
	Supply voltage (V)		—
	Current in the test circuit (Ma)		—
6.1.2.2	Exclusions		N/A

6.2	Protection of equipment users from overvoltages on telecommunication networks		N/A
6.2.1	Separation requirements		N/A
6.2.2	Electric strength test procedure		N/A
6.2.2.1	Impulse test	(see appended table 5.2)	N/A
6.2.2.2	Steady-state test	(see appended table 5.2)	N/A
6.2.2.3	Compliance criteria		N/A

6.3	Protection of the telecommunication wiring system from overheating		N/A
	Max. output current (A)		—
	Current limiting method		—

7	CONNECTION TO CABLE DISTRIBUTION SYSTEMS		N/A
7.1	General		N/A
7.2	Protection of cable distribution system service persons, and users of other equipment connected to the system, from hazardous voltages in the equipment		N/A
7.3	Protection of equipment users from overvoltages on the cable distribution system		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
7.4	Insulation between primary circuits and cable distribution systems		N/A
7.4.1	General		N/A
7.4.2	Voltage surge test	(see appended table 5.2)	N/A
7.4.3	Impulse test	(see appended table 5.2)	N/A

A	ANNEX A, TESTS FOR RESISTANCE TO HEAT AND FIRE		N/A
A.1	Flammability test for fire enclosures of movable equipment having a total mass exceeding 18 kg, and of stationary equipment (see 4.7.3.2)		N/A
A.1.1	Samples.....:		—
	Wall thickness (mm)		—
A.1.2	Conditioning of samples; temperature (°C)		N/A
A.1.3	Mounting of samples		N/A
A.1.4	Test flame (see IEC 60695-11-3)		N/A
	Flame A, B, C or D		—
A.1.5	Test procedure		N/A
A.1.6	Compliance criteria		N/A
	Sample 1 burning time (s)		—
	Sample 2 burning time (s)		—
	Sample 3 burning time (s)		—
A.2	Flammability test for fire enclosures of movable equipment having a total mass not exceeding 18 kg, and for material and components located inside fire enclosures (see 4.7.3.2 and 4.7.3.4)		N/A
A.2.1	Samples, material.....:		—
	Wall thickness (mm)		—
A.2.2	Conditioning of samples; temperature (°C)		N/A
A.2.3	Mounting of samples		N/A
A.2.4	Test flame (see IEC 60695-11-4)		N/A
	Flame A, B or C		—
A.2.5	Test procedure		N/A
A.2.6	Compliance criteria		N/A
	Sample 1 burning time (s)		—
	Sample 2 burning time (s)		—
	Sample 3 burning time (s)		—

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Clause	Requirement + Test	Result - Remark	Verdict
A.2.7	Alternative test acc. To IEC 60695-11-5, cl. 5 and 9		N/A
	Sample 1 burning time (s)		—
	Sample 2 burning time (s)		—
	Sample 3 burning time (s)		—
A.3	Hot flaming oil test (see 4.6.2)		N/A
A.3.1	Mounting of samples		N/A
A.3.2	Test procedure		N/A
A.3.3	Compliance criterion		N/A

B	ANNEX B, MOTOR TESTS UNDER ABNORMAL CONDITIONS (see 4.7.2.2 and 5.3.2)		N/A
B.1	General requirements		N/A
	Position		—
	Manufacturer		—
	Type		—
	Rated values		—
B.2	Test conditions		N/A
B.3	Maximum temperatures	(see appended table 5.3)	N/A
B.4	Running overload test	(see appended table 5.3)	N/A
B.5	Locked-rotor overload test		N/A
	Test duration (days)		—
	Electric strength test: test voltage (V)		—
B.6	Running overload test for d.c. motors in secondary circuits		N/A
B.6.1	General		N/A
B.6.2	Test procedure		N/A
B.6.3	Alternative test procedure		N/A
B.6.4	Electric strength test; test voltage (V)		N/A
B.7	Locked-rotor overload test for d.c. motors in secondary circuits		N/A
B.7.1	General		N/A
B.7.2	Test procedure		N/A
B.7.3	Alternative test procedure		N/A
B.7.4	Electric strength test; test voltage (V)		N/A
B.8	Test for motors with capacitors	(see appended table 5.3)	N/A

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Clause	Requirement + Test	Result - Remark	Verdict
B.9	Test for three-phase motors	(see appended table 5.3)	N/A
B.10	Test for series motors		N/A
	Operating voltage (V)		—
C	ANNEX C, TRANSFORMERS (see 1.5.4 and 5.3.3)		N/A
	Position		—
	Manufacturer		—
	Type		—
	Rated values		—
	Method of protection.....		—
C.1	Overload test	(see appended table 5.3)	N/A
C.2	Insulation	(see appended tables 5.2 and C2)	N/A
	Protection from displacement of windings.....		N/A
D	ANNEX D, MEASURING INSTRUMENTS FOR TOUCH-CURRENT TESTS (see 5.1.4)		N/A
D.1	Measuring instrument		N/A
D.2	Alternative measuring instrument		N/A
E	ANNEX E, TEMPERATURE RISE OF A WINDING (see 1.4.13)		N/A
F	ANNEX F, MEASUREMENT OF CLEARANCES AND CREEPAGE DISTANCES (see 2.10 and Annex G)		N/A
G	ANNEX G, ALTERNATIVE METHOD FOR DETERMINING MINIMUM CLEARANCES		N/A
G.1	Clearances		N/A
G.1.1	General		N/A
G.1.2	Summary of the procedure for determining minimum clearances		N/A
G.2	Determination of mains transient voltage (V)		N/A
G.2.1	AC mains supply		N/A
G.2.2	Earthed d.c. mains supplies		N/A
G.2.3	Unearthed d.c. mains supplies		N/A
G.2.4	Battery operation		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
G.3	Determination of telecommunication network transient voltage (V) :		N/A
G.4	Determination of required withstand voltage (V)		N/A
G.4.1	Mains transients and internal repetitive peaks		N/A
G.4.2	Transients from telecommunication networks		N/A
G.4.3	Combination of transients		N/A
G.4.4	Transients from cable distribution systems		N/A
G.5	Measurement of transient voltages (V)		N/A
	a) Transients from a mains supply		N/A
	For an a.c. mains supply		N/A
	For a d.c. mains supply		N/A
	b) Transients from a telecommunication network		N/A
G.6	Determination of minimum clearances :		N/A
H	ANNEX H, IONIZING RADIATION (see 4.3.13)		N/A
J	ANNEX J, TABLE OF ELECTROCHEMICAL POTENTIALS (see 2.6.5.6)		N/A
	Metal(s) used		—
K	ANNEX K, THERMAL CONTROLS (see 1.5.3 and 5.3.8)		N/A
K.1	Making and breaking capacity		N/A
K.2	Thermostat reliability; operating voltage (V)		N/A
K.3	Thermostat endurance test; operating voltage (V)		N/A
K.4	Temperature limiter endurance; operating voltage (V)		N/A
K.5	Thermal cut-out reliability		N/A
K.6	Stability of operation	(see appended table 5.3)	N/A
L	ANNEX L, NORMAL LOAD CONDITIONS FOR SOME TYPES OF ELECTRICAL BUSINESS EQUIPMENT (see 1.2.2.1 and 4.5.2)		P
L.1	Typewriters		N/A
L.2	Adding machines and cash registers		N/A
L.3	Erasers		N/A
L.4	Pencil sharpeners		N/A
L.5	Duplicators and copy machines		N/A
L.6	Motor-operated files		N/A

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Clause	Requirement + Test	Result - Remark	Verdict

L.7	Other business equipment		P
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M	ANNEX M, CRITERIA FOR TELEPHONE RINGING SIGNALS (see 2.3.1)		N/A
M.1	Introduction		N/A
M.2	Method A		N/A
M.3	Method B		N/A
M.3.1	Ringling signal		N/A
M.3.1.1	Frequency (Hz)		—
M.3.1.2	Voltage (V)		—
M.3.1.3	Cadence; time (s), voltage (V)		—
M.3.1.4	Single fault current (Ma)		—
M.3.2	Tripping device and monitoring voltage		N/A
M.3.2.1	Conditions for use of a tripping device or a monitoring voltage		N/A
M.3.2.2	Tripping device		N/A
M.3.2.3	Monitoring voltage (V)		N/A

N	ANNEX N, IMPULSE TEST GENERATORS (see 1.5.7.2, 1.5.7.3, 2.10.3.9, 6.2.2.1, 7.3.2, 7.4.3 and Clause G.5)		N/A
N.1	ITU-T impulse test generators		N/A
N.2	IEC 60065 impulse test generator		N/A

P	ANNEX P, NORMATIVE REFERENCES		—
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Q	ANNEX Q, Voltage dependent resistors (VDRs) (see 1.5.9.1)		N/A
	- Preferred climatic categories		N/A
	- Maximum continuous voltage		N/A
	- Combination pulse current		N/A
	Body of the VDR Test according to IEC60695-11-5.....		N/A
	Body of the VDR. Flammability class of material (min V-1).....		N/A

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Clause	Requirement + Test	Result - Remark	Verdict

R	ANNEX R, EXAMPLES OF REQUIREMENTS FOR QUALITY CONTROL PROGRAMMES		N/A
R.1	Minimum separation distances for unpopulated coated printed boards (see 2.10.6.2)		N/A
R.2	Reduced clearances (see 2.10.3)		N/A

S	ANNEX S, PROCEDURE FOR IMPULSE TESTING (see 6.2.2.3)		N/A
S.1	Test equipment		N/A
S.2	Test procedure		N/A
S.3	Examples of waveforms during impulse testing		N/A

T	ANNEX T, GUIDANCE ON PROTECTION AGAINST INGRESS OF WATER (see 1.1.2)		N/A
		See separate test report	—

U	ANNEX U, INSULATED WINDING WIRES FOR USE WITHOUT INTERLEAVED INSULATION (see 2.10.5.4)		N/A
		See separate test report	—

V	ANNEX V, AC POWER DISTRIBUTION SYSTEMS (see 1.6.1)		N/A
V.1	Introduction		N/A
V.2	TN power distribution systems		N/A

W	ANNEX W, SUMMATION OF TOUCH CURRENTS		N/A
W.1	Touch current from electronic circuits		N/A
W.1.1	Floating circuits		N/A
W.1.2	Earthed circuits		N/A
W.2	Interconnection of several equipments		N/A
W.2.1	Isolation		N/A
W.2.2	Common return, isolated from earth		N/A
W.2.3	Common return, connected to protective earth		N/A
X	ANNEX X, MAXIMUM HEATING EFFECT IN TRANSFORMER TESTS (see clause C.1)		N/A
X.1	Determination of maximum input current		N/A
X.2	Overload test procedure		N/A

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Y	ANNEX Y, ULTRAVIOLET LIGHT CONDITIONING TEST (see 4.3.13.3)		N/A
Y.1	Test apparatus		N/A
Y.2	Mounting of test samples		N/A
Y.3	Carbon-arc light-exposure apparatus		N/A
Y.4	Xenon-arc light exposure apparatus		N/A

Z	ANNEX Z, OVERVOLTAGE CATEGORIES (see 2.10.3.2 and Clause G.2)		N/A
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AA	ANNEX AA, MANDREL TEST (see 2.10.5.8)		N/A
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BB	ANNEX BB, CHANGES IN THE SECOND EDITION		—
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CC	ANNEX CC, Evaluation of integrated circuit (IC) current limiters		N/A
CC.1	General		N/A
CC.2	Test program 1.....		N/A
CC.3	Test program 2.....		N/A
CC.4	Test program 3.....		N/A
CC.5	Compliance.....		N/A

DD	ANNEX DD, Requirements for the mounting means of rack-mounted equipment		N/A
DD.1	General		N/A
DD.2	Mechanical strength test, variable N.....		N/A
DD.3	Mechanical strength test, 250N, including end stops.....		N/A
DD.4	Compliance.....		N/A

EE	ANNEX EE, Household and home/office document/media shredders		N/A
EE.1	General		N/A
EE.2	Markings and instructions		N/A
	Use of markings or symbols.....		N/A
	Information of user instructions, maintenance and/or servicing instructions.....		N/A
EE.3	Inadvertent reactivation test.....		N/A
EE.4	Disconnection of power to hazardous moving parts:		N/A
	Use of markings or symbols.....		N/A

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EE.5	Protection against hazardous moving parts		N/A
	Test with test finger (Figure 2A)		N/A
	Test with wedge probe (Figure EE1 and EE2)		N/A

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1.5.1	TABLE: List of critical components					P
Object/part No.	Manufacturer/ trademark	Type/model	Technical data	Standard (Edition / year)	Mark(s) of conformity ¹⁾	
PCB	Fai Wong Electronic Pcb Co.	FW-4	V-0, 130°C, min. 1.0mm	UL 796 UL 94	UL E171766	
Enclosure	LG CHEMICAL LTD	LUPOY ER5001RF(#)	V-0, min. 2.0mm, 60°C	UL94 UL746	UL E67171	

Supplementary information:
¹⁾ Provided evidence ensures the agreed level of compliance. See OD-CB2039.

1.5.1	TABLE: Opto Electronic Devices	N/A
Manufacturer		
Type.....		
Separately tested		
Bridging insulation		
External creepage distance.....		
Internal creepage distance		
Distance through insulation.....		
Tested under the following conditions.....		
Input.....		
Output.....		
supplementary information		

1.6.2	TABLE: Electrical data (in normal conditions)					P
U (V)	I (A)	Irated (A)	P (W)	Fuse #	Ifuse (A)	Condition/status
12V	1.42	1.5	17.0	--	--	Max normal load

Supplementary information:
N/A

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2.1.1.5 c) 1)	TABLE: max. V, A, VA test				N/A
Voltage (rated) (V)	Current (rated) (A)	Voltage (max.) (V)	Current (max.) (A)	VA (max.) (VA)	
supplementary information:					

2.1.1.5 c) 2)	TABLE: stored energy			N/A
Capacitance C (μF)	Voltage U (V)	Energy E (J)		
supplementary information:				

2.2	TABLE: evaluation of voltage limiting components in SELV circuits			N/A
Component (measured between)	max. voltage (V) (normal operation)		Voltage Limiting Components	
	V peak	V d.c.		
T1 Between output wiring				
Fault test performed on voltage limiting components	Voltage measured (V) in SELV circuits (V peak or V d.c.)			
--				
supplementary information:				

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2.5	TABLE: Limited power sources		N/A
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Circuit output tested:

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

Components	Test condition (Single fault)	Uoc (V)	I _{sc} (A)		VA	
			Meas.	Limit	Meas.	Limit

supplementary information:

Sc=Short circuit, Oc=Open circuit

2.10.2	Table: working voltage measurement		N/A
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Location	RMS voltage (V)	Peak voltage (V)	Comments

supplementary information:

2.10.3 and 2.10.4	TABLE: Clearance and creepage distance measurements		N/A
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Clearance (cl) and creepage distance (cr) at/of/between:	U peak (V)	U r.m.s. (V)	Required cl (mm)	cl (mm)	Required cr (mm)	cr (mm)

2.10.5	TABLE: Distance through insulation measurements		N/A
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Distance through insulation (DTI) at/of:	U peak (V)	U rms (V)	Test voltage(V)	Required DTI (mm)	DTI (mm)

Supplementary information:--

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4.3.8	TABLE: Batteries							N/A	
The tests of 4.3.8 are applicable only when appropriate battery data is not available		--					--		
Is it possible to install the battery in a reverse polarity position?							N/A		
	Non-rechargeable batteries			Rechargeable batteries					
	Discharging		Un-intentional charging	Charging		Discharging		Reversed charging	
	Meas. current	Manuf. Specs.		Meas. current	Manuf. Specs.	Meas. current	Manuf. Specs.	Meas. current	Manuf. Specs.
Max. current during normal condition									
Max. current during fault condition									
Test results:							Verdict		
- Chemical leaks									
- Explosion of the battery									
- Emission of flame or expulsion of molten metal									
- Electric strength tests of equipment after completion of tests									
Supplementary information:									

4.3.8	TABLE: Batteries							N/A	
Battery category		(Lithium, NiMh, NiCad, Lithium Ion ...)							
Manufacturer									
Type / model.....									
Voltage									
Capacity.....		mAh							
Tested and Certified by (incl. Ref. No.)									
Circuit protection diagram:									

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MARKINGS AND INSTRUCTIONS (1.7.13)

Location of replaceable battery	
Language(s)	
Close to the battery	
In the servicing instructions	
In the operating instructions	

4.5	TABLE: Thermal requirements						P
Supply voltage (V)			12VDC		--	--	
Ambient T _{min} (°C)			25.5	25.0	--	—	
Ambient T _{max} (°C)			25.5	25.0	--	—	
Maximum measured temperature T of part/at.....:	T (°C)					Allowed T _{max} (°C)	
PCB			26.3	26.1	--	130	
Connecting wire			25.6	25.2		105	
Handle(inside)			25.6	25.1	--	70	
Handle(outside)			25.7	25.6	--	70	
Enclosure			25.5	25.1	--	70	
Supplementary information:							
Temperature T of winding:	t ₁ (°C)	R ₁ (Ω)	t ₂ (°C)	R ₂ (Ω)	T (°C)	Allowed T _{max} (°C)	Insulation class
Supplementary information:							

4.5.5	TABLE: Ball pressure test of thermoplastic parts			N/A
Allowed impression diameter (mm)	≤ 2 mm			—
Part	Test temperature (°C)		Impression diameter (mm)	
Supplementary information:--				

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Clause	Requirement + Test	Result - Remark	Verdict

4.7	TABLE: Resistance to fire				P
Part	Type of material	Thickness (mm)	Flammability class	Evidence	
PCB	FW-4	1.0	V-0	UL E171766	
Enclosure	LUPOY ER5001RF(#)	2.0mm	V-0	UL E67171	
Supplementary information:					

5.1	TABLE: touch current measurement			N/A
Measured between:	Measured (mA)	Limit (mA)	Comments/conditions	
supplementary information:				

5.2	TABLE: Electric strength tests, impulse tests and voltage surge tests			N/A
Test voltage applied between:	Voltage shape (AC, DC, impulse, surge)	Test voltage (V)	Breakdown Yes / No	
Supplementary information:				

5.3	TABLE: Fault condition tests					P
	Ambient temperature (°C)		25°C if not mentioned			—
	Power source for EUT: Manufacturer, model/type, output rating		See page 1			—
Component No.	Fault	Supply voltage (V)	Test time	Fuse #	Fuse current (A)	Observation
D15	S-C	12VDC	10mins	--	--	The appliance works normally

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Clause	Requirement + Test					Result - Remark	Verdict
D4	S-C	12VDC	10mins	--	--	The appliance works normally	
D16	S-C	12VDC	10mins	--	--	Power reduced, recoverable	
C10	S-C	12VDC	10mins	--	--	The appliance works normally	
Supplementary information: S-C=short circuit							

C.2	TABLE: transformers							N/A
Loc.	Tested insulation	Working voltage peak / V (2.10.2)	Working voltage rms / V (2.10.2)	Required electric strength (5.2)	Required clearance / mm (2.10.3)	Required creepage distance / mm (2.10.4)	Required distance thr. insul. (2.10.5)	
Loc.	Tested insulation			Test voltage / V	Measured clearance / mm	Measured creepage dist. / mm	Measured distance thr. insul. / mm; number of layers	
supplementary information:								
* 2 or 3 layers / 0.4mm / Annex U								

C.2	TABLE: transformers							N/A
Transformer								

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Attachment: Photos of the product:

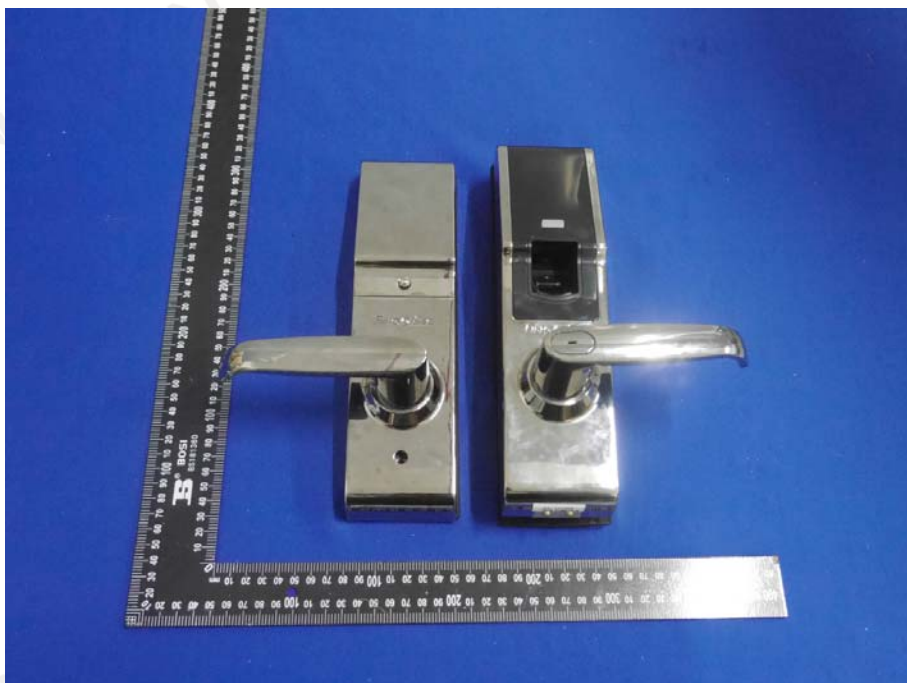


Photo 1: Overall view

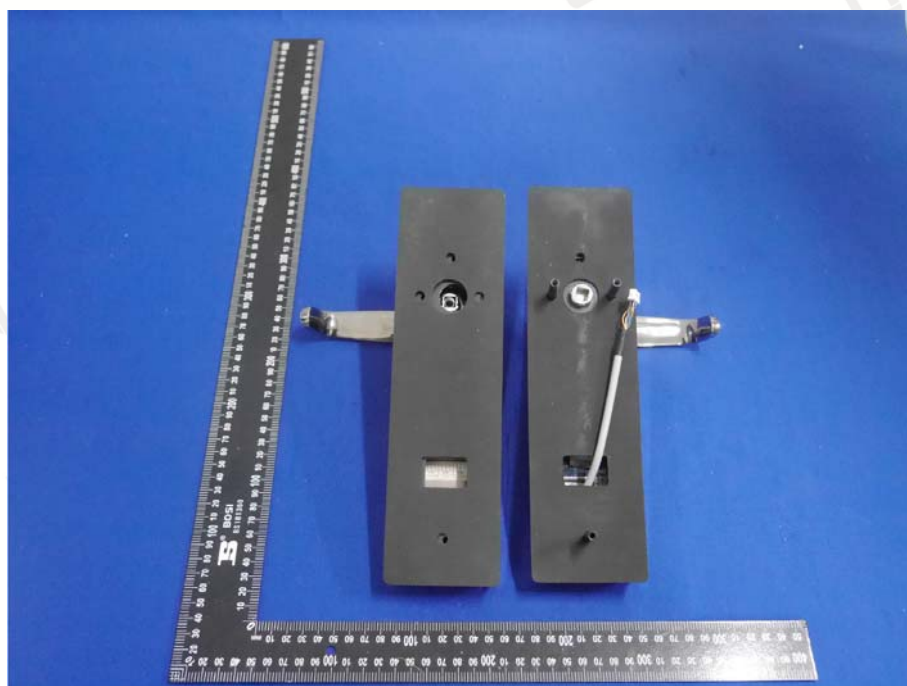


Photo 2: Bottom view

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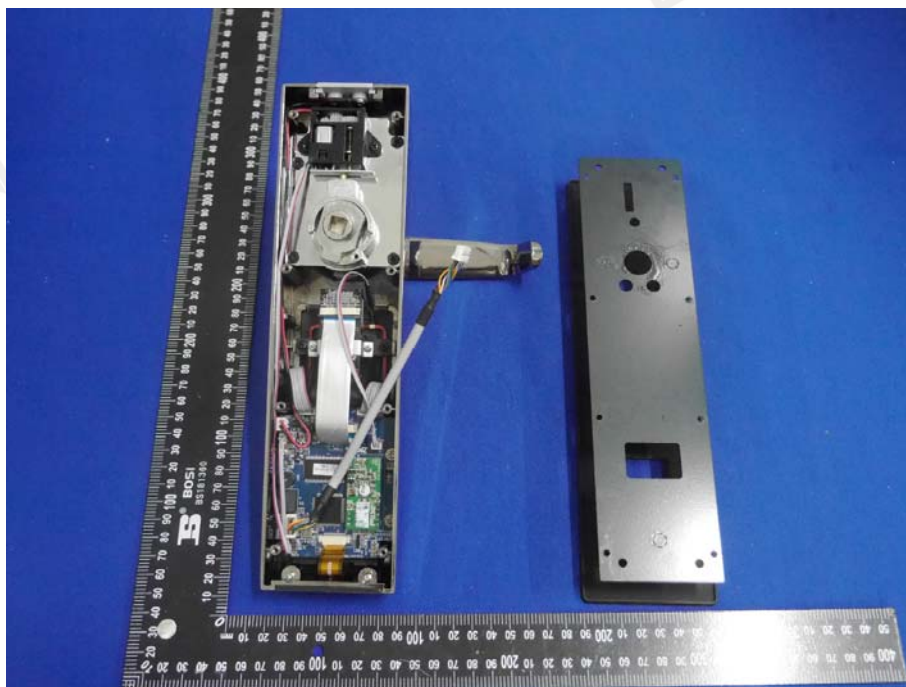


Photo 3: Internal view

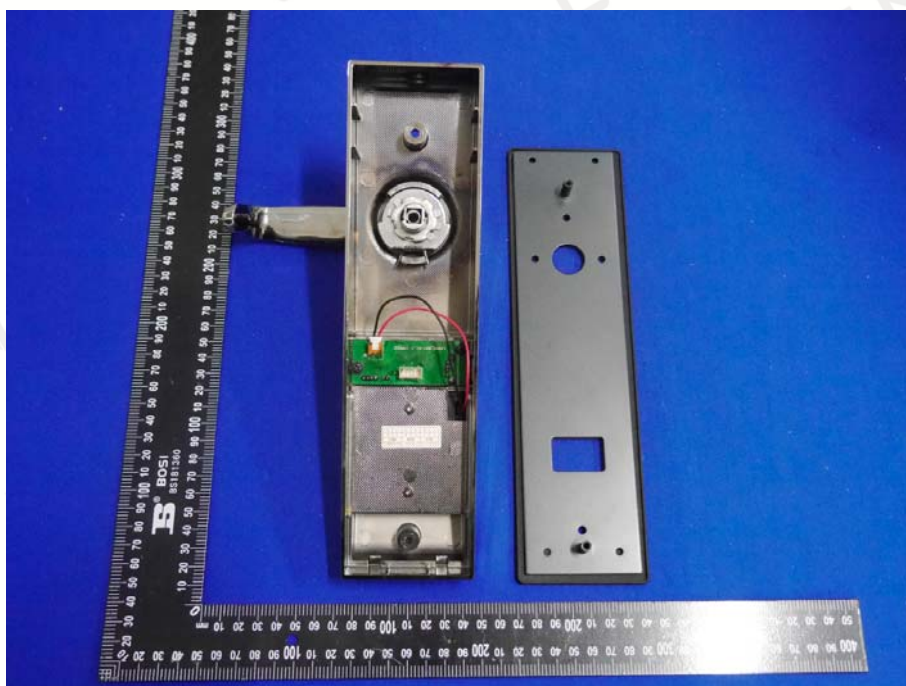


Photo 4: Internal view

-----End of report-----

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