LVD TEST REPORT

EN 60950-1:2006/A2:2013

Information technology equipment – Safety –Part 1: General requirements

For

Guangzhou Baolun Electronics Co., Ltd.

No.1 Building, Zhongcun Industrial B Zone,Zhongcun Street, Panyu, Guangzhou, China

Model: TV-811F, TV-812F, TV-814F, TV-810MB, TV-810RC, TV-810S

June 26, 2019

This Report Concerns: ☒ Original Report	**Equipment Type:** Wireless projection interactive terminal
Test By:	Fan / Fan
Report Number:	TH19FR-937S
Test Date:	June 16 ~ 26, 2019
Reviewed By:	Prince /
Approved By:	Prince /
Prepared By:	**Shenzhen Tian Hai Test Technology Co., Ltd.** 4F, A3 BLDG, The Silicon Valley Power intelligent terminal industrial park, Guanlan street, Longhua district, Shenzhen Tel : 86-755-86615100 Fax: 86-755-86615105

Note: This test report is limited to the above client company and the product model only. It may not beduplicated without prior written consent of Shenzhen Tian Hai Test Technology Co.,Ltd.

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TEST REPORT

EN 60950-1: 2006/A2:2013

Information technology equipment – Safety –Part 1: General requirements

Report Reference No.....:	TH19FR-937S
Tested by (signature).....:	Fan /
Reviewed by (signature).....	Prince /
Approved by (signature).....	Prince /
Date of issue.....:	June 26, 2019
Testing Laboratory Name.....:	**Shenzhen Tian Hai Test Technology Co., Ltd.**
Address.....:	4F, A3 BLDG, The Silicon Valley Power intelligent terminal industrial park, Guanlan street, Longhua district, Shenzhen
Testing location.....:	Same as above
Applicant's Name.....:	**Guangzhou Baolun Electronics Co., Ltd.**
Address.....:	No.1 Building, Zhongcun Industrial B Zone,Zhongcun Street, Panyu, Guangzhou, China
Test specification	
Standard.....:	EN 60950-1:2006/A2:2013
Test procedure .....:	CE- mark
Procedure deviation.....:	N/A
Non-standard test method.....:	N/A
Test item description.....:	**Wireless projection interactive terminal**
Trademark.....:	itc
Model and/or type reference.....:	TV-811F, TV-812F, TV-814F, TV-810MB, TV-810RC, TV-810S
Manufacturer.....:	**Guangzhou Baolun Electronics Co., Ltd.**
Address.....:	No.1 Building, Zhongcun Industrial B Zone,Zhongcun Street, Panyu, Guangzhou, China
Rating(s).....:	Input: 100-240V～, 50/60Hz
Note.....:	All test performance on: TV-811F.

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Particulars: test item vs. test requirements

Equipment mobility ..... Moveable equipment

Operating condition..... Continuous

Mains supply tolerance (%)..... -10%, +10%

Class of equipment ..... Class Ⅰ

Protection against ingress of water IPX0

Test case verdicts

Test case does not apply to the test object N/A

.....

Test item does meet the requirement ..... P(ass)

Test item does not meet the requirement ... F(ail)

General remarks:

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

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

"(see remark #)" refers to additional information appended to the report.

"(see appended table)" refers to a table appended to the report.

Throughout this report a point is used as the decimal separator.

Unless otherwise specified, all tests are done under normal ambient condition 25℃±5℃, RH: 65%±20% and air pressure of 860 mbar to 1060 mbar.

Wireless projection interactive terminal
Model: TV-811F
Input: 100-240V～, 50/60Hz

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EN 60950-1			
Clause	Requirement – Test	Result – Remark	Verdict
1	GENERAL		P
1.5	Components		P
1.5.1	General		P
	Comply with IEC 60950 or relevant component standard	Components that were found to affect safety aspects comply with the requirements of this standard or within the safety aspects of the relevant IEC component standards.	P
1.5.2	Evaluation and testing of components	Components that are certified to IEC and /or national standards are used correctly within their ratings. Components not covered by IEC standards are tested under the conditions present in the equipment.	P
1.5.3	Thermal controls		N/A
1.5.4	Transformers	Transformers used are suitable for their intended application and comply with the relevant requirements of the standard and particularly Annex C.	P
1.5.5	Interconnecting cables	Interconnection cables for providing power to other equipment are considered as SELV and non-hazardous energy.	N/A
1.5.6	Capacitors in primary circuits .....:		N/A
1.5.7	Double insulation or reinforced insulation bridged by components		N/A
1.5.7.1	General		N/A
1.5.7.2	Bridging capacitors	No bridging resistors.	N/A
1.5.7.3	Bridging resistors	No bridging resistors.	N/A
1.5.7.4	Accessible parts		N/A
1.5.8	Components in equipment for IT power systems	Not for IT power system	N/A
1.6	Power interface		P
1.6.1	AC power distribution systems		P
1.6.2	Input current		P
1.6.3	Voltage limit of hand-held equipment	This appliance is not hand-held equipment.	N/A

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EN 60950-1			
Clause	Requirement – Test	Result – Remark	Verdict
1.6.4	Neutral conductor		P
1.7	Marking and instructions		P
1.7.1	Power rating		P
	Rated voltage(s) or voltage range(s) (V) .....:	AC110-240V	P
	Symbol for nature of supply, for d.c. only.....:	~	N/A
	Rated frequency or rated frequency range (Hz) .. :	50/60Hz	P
	Rated current (mA or A) .....:		P
	Manufacturer's name or trademark or identification mark .....:	Guangzhou Baolun Electronics Co., Ltd.	P
	Type/model or type reference.....:	TV-811F, TV-812F, TV-814F, TV-810MB, TV-810RC, TV-810S	P
	Symbol for Class II equipment only .....:		N/A
	Other symbols .....:	Other symbols do not give rise to misunderstanding.	P
	Certification marks .....:	CE	P
1.7.2	Safety instructions	English version safety instruction provided.	P
1.7.3	Short duty cycles		N/A
1.7.4	Supply voltage adjustment .....:	No voltage adjustment	N/A
	Methods and means of adjustment; reference to installation instructions .....:		N/A
1.7.5	Power outlets on the equipment .....:		N/A
1.7.6	Fuse identification (marking, special fusing characteristics, cross-reference) .....:	Fuse used	P
1.7.7	Wiring terminals		P
1.7.7.1	Protective earthing and bonding terminals .....:		P
1.7.7.2	Terminal for a.c. mains supply conductors	No such terminals provided.	N/A
1.7.7.3	Terminals for d.c. mains supply conductors	No such terminals provided.	N/A
1.7.8	Controls and indicators		P
1.7.8.1	Identification, location and marking .....:		P
1.7.8.2	Colours .....:		P
1.7.8.3	Symbols according to IEC 60417.....:		P
1.7.8.4	Markings using figures .....:	No indicators for different positions.	N/A
1.7.9	Isolation of multiple power sources .....:		N/A
1.7.10	IT power distribution systems		N/A

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Clause	Requirement – Test	Result – Remark	Verdict
1.7.11	Thermostats and other regulating devices	No thermostat or other regulating devices provided that require adjustment during installation or normal use.	N/A
1.7.12	Language(s) .....:	Rating marking and safety Instruction is in English.	—
1.7.13	Durability	The labels were subjected to the permanence of marking test. The labels were rubbed with cloth soaked with water for 15 s and then again for 15 s with the cloth soaked with petroleum spirit. After this test there was no damage to the labels. The marking on the labels did not fade. There was no curling or lifting of the label's edges.	P
1.7.14	Removable parts	Not provided on removable parts.	P
1.7.15	Replaceable batteries	No batteries used	N/A
	Language(s).....:	--	—
1.7.16	Operator access with a tool.....:		N/A
1.7.17	Equipment for restricted access locations.....:	Equipment not intended for use in restricted access location.	N/A
2	PROTECTION FROM HAZARDS		P
2.1	Protection from electric shock and energy hazards	Class I	P
2.1.1	Protection in operator access areas		P
2.1.1.1	Access to energized parts	No access with test finger and test pin to any with only basic insulation to ELV or hazardous voltage.	P
	Test by inspection .....:		P
	Test with test finger .....:		P
	Test with test pin .....:		P
	Test with test probe .....:	No TNV.	N/A
2.1.1.2	Battery compartments .....:	No battery compartment.	N/A
2.1.1.3	Access to ELV wiring	No ELV wiring in operator accessible area.	N/A
	Working voltage (Vpeak or Vrms); minimum distance (mm) through insulation		—

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Clause	Requirement – Test	Result – Remark	Verdict
2.1.1.4	Access to hazardous voltage circuit wiring	No hazardous voltage wiring in operator accessible area.	N/A
2.1.1.5	Energy hazards .....:		P
2.1.1.6	Manual controls		N/A
2.1.1.7	Discharge of capacitors in equipment	No such capacitor used	N/A
	Time-constant (s); measured voltage (V).....:		—
2.1.2	Protection in service access areas		P
2.1.3	Protection in restricted access locations	The unit is not limited to be used in restricted access locations.	N/A
2.2	SELV circuits		P
2.2.1	General requirements		P
2.2.2	Voltages under normal conditions (V).....:	Between any conductor of the SELV circuits 42.4V peak or 60Vd.c. are not exceeded. See appended table 2.2.2	P
2.2.3	Voltages under fault conditions (V).....:	Single fault did not cause excessive voltage in accessible SELV circuits. Limits of 71V peak and 120Vd.c. were not exceed and SELV limits not for longer than 0.2 seconds. See appended table 2.2.3	P
2.2.3.1	Separation by double insulation or reinforced insulation (method 1)	In accordance with method 1. Double or reinforced for the highest working voltage across the insulation is provided.	P
2.2.3.2	Separation by earthed screen (method 2)	Method 2 is not used.	N/A
2.2.3.3	Protection by earthing of the SELV circuit (method 3)	Method 3 is not used.	N/A
2.2.4	Connection of SELV circuits to other circuits.....:	See 2.2.2, 2.2.3, no direct connection between SELV and primary circuits.	P
2.3	TNV circuits	No TNV circuits.	N/A
2.3.1	Limits		N/A
	Type of TNV circuits.....:		—
2.3.2	Separation from other circuits and from accessible parts		N/A
	Insulation employed.....:		—
2.3.3	Separation from hazardous voltages		N/A

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Clause	Requirement – Test	Result – Remark	Verdict
	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		P
2.4.1	General requirements		P
2.4.2	Limit values:0.7mA	0.26mA	P
	Frequency (Hz).....:		—
	Measured current (mA).....:		—
	Measured voltage (V).....:		—
	Measured capacitance (μF)..... :		—
2.4.3	Connection of limited current circuits to other circuits	Only to be connected to SELV.	P
2.5	Limited power sources		P
	Inherently limited output		P
	Impedance limited output		P
	Overcurrent protective device limited output		P
	Regulating network limited output under normal operating and single fault condition		N/A
	Regulating network limited output under normal operating conditions and overcurrent protective device limited output under single fault condition		N/A
	Output voltage (V), output current (A), apparent power (VA)..... :		—
	Current rating of overcurrent protective device (A)		—
2.6	Provisions for earthing and bonding		P
2.6.1	Protective earthing		P
2.6.2	Functional earthing		P
2.6.3	Protective earthing and protective bonding conductors		P
2.6.3.1	General		P
2.6.3.2	Size of protective earthing conductors		P
	Rated current (A), cross-sectional area (mm2), AWG ..... :		—
2.6.3.3	Size of protective bonding conductors		P
	Rated current (A), cross-sectional area (mm2), AWG ..... :		—

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Clause	Requirement – Test	Result – Remark	Verdict
2.6.3.4	Resistance (Ω) of earthing conductors and their terminations, test current (A)..... :		P
2.6.3.5	Colour of insulation..... :		P
2.6.4	Terminals		P
2.6.4.1	General		P
2.6.4.2	Protective earthing and bonding terminals		P
	Rated current (A), type and 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		P
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		P
2.6.5.4	Parts that can be removed by an operator		P
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
2.6.5.8	Reliance on telecommunication network or cable distribution system		N/A
2.7	Over current and earth fault protection in primary circuits		N/A
2.7.1	Basic requirements	Protective devices are integrated in the equipment	N/A
	Instructions when protection relies on building installation		N/A
2.7.2	Faults not covered in 5.3	The protection devices are well dimensioned and mounted.	N/A
2.7.3	Short-circuit backup protection	Building installation is considered as providing short-circuit backup protection.	N/A
2.7.4	Number and location of protective devices ..... :	Overcurrent protection by one built-in fuse.	N/A
2.7.5	Protection by several devices	Protection by one fuse only.	N/A
2.7.6	Warning to service personnel..... :	No service work necessary.	N/A
2.8	Safety interlocks		N/A
2.8.1	General principles		N/A

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Clause	Requirement – Test	Result – Remark	Verdict
2.8.2	Protection requirements		N/A
2.8.3	Inadvertent reactivation		N/A
2.8.4	Fail-safe operation		N/A
2.8.5	Moving parts		N/A
2.8.6	Overriding		N/A
2.8.7	Switches and relays		N/A
2.8.7.1	Contact gaps (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		N/A
2.8.8	Mechanical actuators		N/A
2.9	Electrical insulation		P
2.9.1	Properties of insulating materials	Natural rubber, asbestos or hygroscopic materials are not used.	P
2.9.2	Humidity conditioning	48 hours	P
	Humidity (%) ..... :	94%	—
	Temperature (°C) ..... :	40 °C	—
2.9.3	Grade of insulation		P
2.10	Clearances, creepage distances and distances through insulation		P
2.10.1	General	Pollution degree 2 applicable	P
2.10.2	Determination of working voltage	Unit was connected to a 240V TN power system	P
2.10.3	Clearances	Alternate method of Annex G was not considered.	P
2.10.3.1	General	Annex F and minimum clearances considered.	P
2.10.3.2	Clearances in primary circuits		P
2.10.3.3	Clearances in secondary circuits		N/A
2.10.3.4	Measurement of transient voltage levels	Normal transient voltage considered (over voltage category II for primary circuit). Alternate Annex G not considered.	N/A
2.10.4	Creepage distances		P
	CTI tests..... :	CTI rating for all materials of minimum 100.	—

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2.10.5	Solid insulation		P
2.10.5.1	Minimum distance through insulation		P
2.10.5.2	Thin sheet material	For thin sheet materials used to provide supplementary or reinforced insulation refer to tables 5.2 and C.2	P
	Number of layers (pcs)..... :		—
	Electric strength test		—
2.10.5.3	Printed boards	Not applied for.	N/A
	Distance through insulation		N/A
	Electric strength test for thin sheet insulating material		—
	Number of layers (pcs)..... :		N/A
2.10.5.4	Wound components	Approved tape used in transformer on PCB	P
	Number of layers (pcs)..... :		P
	Two wires in contact inside wound component; angle between 45° and 90° ..... :	By insulation tape and tube.	P
2.10.6	Coated printed boards	Not applied for this sub-clause.	N/A
2.10.6.1	General		N/A
2.10.6.2	Sample preparation and preliminary inspection		N/A
2.10.6.3	Thermal cycling		N/A
2.10.6.4	Thermal ageing (°C)..... :		N/A
2.10.6.5	Electric strength test		—
2.10.6.6	Abrasion resistance test		N/A
	Electric strength test		—
2.10.7	Enclosed and sealed parts..... :	No hermetically sealed components.	N/A
	Temperature T1=T2 + Tma – Tamb +10K (°C).... :		N/A
2.10.8	Spacings filled by insulating compound..... :	Photo couplers are approved components. No other components applied for.	P
	Electric strength test		—
2.10.9	Component external terminations		N/A
2.10.10	Insulation with varying dimensions	No distance reduction applied for.	N/A

3	WIRING, CONNECTIONS AND SUPPLY	P
3.1	General	P

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Clause	Requirement – Test	Result – Remark	Verdict
3.1.1	Current rating and overcurrent protection	All internal wires are UL recognized wiring	P
3.1.2	Protection against mechanical damage	Wires do not touch sharp edges and heat sink which could damage the insulation and cause hazard.	P
3.1.3	Securing of internal wiring	The wires are secured by soldering and mechanical clamping so that a loosening of the terminal connection is unlikely.	P
3.1.4	Insulation of conductors	The insulation of the individual conductors is suitable for the application and the working voltage. For the insulation material see 3.1.1.	P
3.1.5	Beads and ceramic insulators	Not used.	N/A
3.1.6	Screws for electrical contact pressure	No screws used for electrical connection.	N/A
3.1.7	Insulating materials in electrical connections	All connections are metal to metal.	N/A
3.1.8	Self-tapping and spaced thread screws	No self tapping screws are used.	N/A
3.1.9	Termination of conductors	All conductors are reliably secured by soldering into PCB and additionally fixed by glue or cable tie, or hooked before soldering to plug portion pins.	P
	10 N pull test	Force of 10 N applied to the termination points of the conductors.	N/A
3.1.10	Sleeving on wiring		P

3.2	Connection to a mains supply		P
3.2.1	Means of connection .....:		P
3.2.1.1	Connection to an a.c. mains supply	A detachable power supply cord	P
3.2.1.2	Connection to a d.c. mains supply		N/A
3.2.2	Multiple supply connections		N/A
3.2.3	Permanently connected equipment		N/A

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Clause	Requirement – Test	Result – Remark	Verdict
	Number of conductors, diameter (mm) of cable and conduits .....:		—
3.2.4	Appliance inlets		P
3.2.5	Power supply cords		P
3.2.5.1	AC power supply cords		P
	Type.....:		—
	Rated current (A), cross-sectional area (mm2), AWG.....:		—
3.2.5.2	DC power supply cords		N/A
3.2.6	Cord anchorages and strain relief		N/A
	Mass of equipment (kg), pull (N) .....:		—
	Longitudinal displacement (mm) .....:		—
3.2.7	Protection against mechanical damage	.	P
3.2.8	Cord guards	No cord guard provided	N/A
	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		P
3.3.1	Wiring terminals		P
3.3.2	Connection of non-detachable power supply cords		P
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 (mm2).....:		—
3.3.5	Wiring terminal sizes		N/A
	Rated current (A), type and nominal thread diameter (mm) .....:		—
3.3.6	Wiring terminals design		N/A
3.3.7	Grouping of wiring terminals		N/A
3.3.8	Stranded wire		N/A
3.4	Disconnection from the mains supply		P
3.4.1	General requirement		P
3.4.2	Disconnect devices	A detachable power supply cord	P

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Clause	Requirement – Test	Result – Remark	Verdict
3.4.3	Permanently connected equipment	Not permanently connected equipment.	N/A
3.4.4	Parts which remain energized		P
3.4.5	Switches in flexible cords	No switch used in flexible cord.	N/A
3.4.6	Single-phase equipment and d.c. equipment	The plug disconnects both poles simultaneously.	P
3.4.7	Three-phase equipment	Single phase equipment.	N/A
3.4.8	Switches as disconnect devices		N/A
3.4.9	Plugs as disconnect devices	Plug and AC coupler used	P
3.4.10	Interconnected equipment	Not intended to connect other equipment.	N/A
3.4.11	Multiple power sources		N/A
3.5	Interconnection of equipment		P
3.5.1	General requirements		P
3.5.2	Types of interconnection circuits.....:	Interconnection circuits of SELV through sec o/p cable.	P
3.5.3	ELV circuits as interconnection circuits	No ELV interconnection.	N/A
4	PHYSICAL REQUIREMENTS		P
4.1	Stability		N/A
	Angle of 10°	Not fall over	P
4.2	Mechanical strength		P
4.2.1	General	Test at all source of plastic material used for enclosure. After tests, unit complies with the requirements of sub-clauses 2.1.1 and 2.10.	P
4.2.2	Steady force test, 10 N	10 N applied to all components other than enclosure.	P
4.2.3	Steady force test, 30 N		N/A
4.2.4	Steady force test, 250 N	250 N applied to outer enclosure. No energy or other hazards.	P
4.2.5	Impact test	No hazard as result from steel ball impact test from 1.3mm, 3 times.	P
4.2.6	Drop test		N/A

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Clause	Requirement – Test	Result – Remark	Verdict
4.2.7	Stress relief test	After the test at temperature of 70°C, no shrinkage, distortion or loosening of any enclosure part was noticeable on the equipment.	P
4.2.8	Cathode ray tubes	No CRT in the unit.	N/A
	Picture tube separately certified.....:		N/A
4.2.9	High pressure lamps	No high pressure lamp provided.	N/A
4.2.10	Wall or ceiling mounted equipment; force (N) .....:		N/A
4.3	Design and construction		P
4.3.1	Edges and corners	Edges and corners of the enclosure are rounded.	P
4.3.2	Handles and manual controls; force (N).....:	No handles or controls provided.	N/A
4.3.3	Adjustable controls	No such controls provided.	N/A
4.3.4	Securing of parts	Mechanical fixings in such a way designed that they will withstand mechanical stress occurring in normal use.	P
4.3.5	Connection of plugs and sockets	Mismatch of connectors either not possible or does not result in any hazard.	P
4.3.6	Direct plug-in equipment		N/A
	Dimensions (mm) of mains plug for direct plug-in:		N/A
	Torque and pull test of mains plug for direct plug-in; torque (Nm); pull (N).....:		N/A
4.3.7	Heating elements in earthed equipment	No such elements.	N/A
4.3.8	Batteries	No batteries.	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	Equipment in intended use not considered to be exposed to these.	N/A
4.3.11	Containers for liquids or gases	No container for liquids or gases provided.	N/A
4.3.12	Flammable liquids.....:	No flammable liquids provided.	N/A
	Quantity of liquid (l).....:		N/A
	Flash point (°C).....:		N/A
4.3.13	Radiation; type of radiation .....:		N/A
4.3.13.1	General		N/A

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Clause	Requirement – Test	Result – Remark	Verdict
4.3.13.2	Ionizing radiation	No 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		N/A
	Part, property, retention after test, flammability classification .....:		N/A
4.3.13.4	Human exposure to ultraviolet (UV) radiation .....:		N/A
4.3.13.5	Laser (including LEDs)		N/A
	Laser class .....:		—
4.3.13.6	Other types .....:		N/A
4.4	Protection against hazardous moving parts		N/A
4.4.1	General		N/A
4.4.2	Protection in operator access areas		N/A
4.4.3	Protection in restricted access locations		N/A
4.4.4	Protection in service access areas		N/A
4.5	Thermal requirements		P
4.5.1	Maximum temperatures	(see appended table 4.5)	P
	Normal load condition per Annex L.....:		P
4.5.2	Resistance to abnormal heat		P
4.6	Openings in enclosures		N/A
4.6.1	Top and side openings	No such openings	N/A
	Dimensions (mm) .....:		—
4.6.2	Bottoms of fire enclosures		N/A
	Construction of the bottom.....:		—
4.6.3	Doors or covers in fire enclosures		N/A
4.6.4	Openings in transportable equipment		N/A
4.6.5	Adhesives for constructional purposes	Not used.	N/A
	Conditioning temperature (°C)/time (weeks).....:		—
4.7	Resistance to fire		P

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Clause	Requirement – Test	Result – Remark	Verdict
4.7.1	Reducing the risk of ignition and spread of flame	No excessive temperatures. No easily burning materials employed. Fire enclosure provided. Safety relevant components used within their specified temperature limits	P
	Method 1, selection and application of components wiring and materials		P
	Method 2, application of all of simulated fault condition tests		N/A
4.7.2	Conditions for a fire enclosure	See below and appended table.	P
4.7.2.1	Parts requiring a fire enclosure	With having the following components: - components in primary - components in secondary(not supplied by LPS) The fire enclosure is required.	P
4.7.2.2	Parts not requiring a fire enclosure		P
4.7.3	Materials		P
4.7.3.1	General	PCB rated V-0.	P
4.7.3.2	Materials for fire enclosures	V-0 fire enclosure used.	P
4.7.3.3	Materials for components and other parts outside fire enclosures		P
4.7.3.4	Materials for components and other parts inside fire enclosures	Internal components except small parts are V-2 or better.	P
4.7.3.5	Materials for air filter assemblies	No air filter provided.	N/A
4.7.3.6	Materials used in high-voltage components	No high voltage components provided.	N/A

5	ELECTRICAL REQUIREMENTS AND SIMULATED ABNORMAL CONDITIONS		P
5.1	Touch current and protective conductor current	Class I	P
5.1.1	General		P
5.1.2	Equipment under test (EUT)	EUT has only one mains connection.	P
5.1.3	Test circuit		P
5.1.4	Application of measuring instrument	Using measuring instrument in annex D.	P

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Clause	Requirement – Test	Result – Remark	Verdict
5.1.5	Test procedure	The touch current was measured from mains to SELV output interface and accessible enclosure with foil.	P
5.1.6	Test measurements		P
	Test voltage (V) .....:	264V, 60Hz	—
	Measured touch current (mA) .....:	0.12	—
	Max. allowed touch current (mA) .....:		—
	Measured protective conductor current (mA) .....:	--	—
	Max. allowed protective conductor current (mA) :	--	—
5.1.7	Equipment with touch current exceeding 3.5 mA :	Not such equipment.	N/A
5.1.8	Touch currents to and from telecommunication networks and cable distribution systems and from telecommunication networks	No TNV circuit connection.	N/A
5.1.8.1	Limitation of the touch current to a telecommunication network and a cable distribution system		N/A
	Test voltage (V) .....:		—
	Measured touch current (mA) .....:		—
	Max. allowed touch current (mA) .....:		—
5.1.8.2	Summation of touch currents from telecommunication networks.....:	No TNV.	N/A

5.2	Electric strength		P
5.2.1	General	(see appended table 5.2)	P
5.2.2	Test procedure	(see appended table 5.2)	P

5.3	Abnormal operating and fault conditions		P
5.3.1	Protection against overload and abnormal operation	Output overload test, the most unfavourable load tested.	P
5.3.2	Motors		P
5.3.3	Transformers		N/A
5.3.4	Functional insulation.....:	Method c). Results see in appended table 5.3.	P
5.3.5	Electromechanical components	No electromechanical component provided.	N/A
5.3.6	Simulation of faults	Results see appended table 5.3.	P
5.3.7	Unattended equipment		N/A

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Clause	Requirement – Test	Result – Remark	Verdict
5.3.8	Compliance criteria for abnormal operating and fault conditions	No fire occurred inside of the equipment. No molten metal was emitted. Electric strength test primary → SELV, primary → plastic enclosure wrapped with foil were passed.	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		N/A
	Test 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		N/A
6.2.2.2	Steady-state test		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	Protection of cable distribution system service persons, and users of other equipment connected to the system, from hazardous voltages in the equipment		N/A
7.2	Protection of equipment users from overvoltages on the cable distribution system		N/A
7.3	Insulation between primary circuits and cable distribution systems		N/A
7.3.1	General		N/A
7.3.2	Voltage surge test		N/A

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Clause	Requirement – Test	Result – Remark	Verdict
7.3.3	Impulse test		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) *UL recognized material V-0 enclosure used.*		N/A
A.2.1	Samples, material.....:		—
	Wall thickness (mm).....:		—
A.2.2	Conditioning of samples		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).....:		—
A.2.7	Alternative test acc. to IEC 60695-2-2, cl. 4 and 8		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

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Clause	Requirement – Test	Result – Remark	Verdict
B	ANNEX B, MOTOR TESTS UNDER ABNORMAL CONDITIONS (see 4.7.2.2 and 5.3.2)		P
B.1	General requirements		P
	Position .....:		—
	Manufacturer .....:		—
	Type .....:		—
	Rated values .....:		—
B.2	Test conditions		P
B.3	Maximum temperatures		P
B.4	Running overload test		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.7	Locked-rotor overload test for d.c. motors in secondary circuits		N/A
B.7.1	Test procedure		N/A
B.7.2	Alternative test procedure; test time (h)..... :		N/A
B.7.3	Electric strength test		N/A
B.8	Test for motors with capacitors		N/A
B.9	Test for three-phase motors		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		N/A
C.2	Insulation		N/A
	Protection from displacement of windings.....:		N/A
D	ANNEX D, MEASURING INSTRUMENTS FOR TOUCH-CURRENT TESTS		P
D.1	Measuring instrument	Compliance.	P
D.2	Alternative measuring instrument		N/A
E	ANNEX E, TEMPERATURE RISE OF A WINDING		N/A

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Clause	Requirement – Test	Result – Remark	Verdict
F	ANNEX F, MEASUREMENT OF CLEARANCES AND CREEPAGE DISTANCES (see 2.10)		P
G	ANNEX G, ALTERNATIVE METHOD FOR DETERMINING MINIMUM CLEARANCES		N/A
G.1	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	DC mains supply		N/A
G.3	Determination of telecommunication network transient voltage (V)..... :		N/A
G.4	Determination of required withstand voltage (V)...:		N/A
G.5	Measurement of transient levels (V)..... :		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 used .....:		—
K	ANNEX K, THERMAL CONTROLS (see 1.5.3 and 5.3.7)		P
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		N/A
L	ANNEX L, NORMAL LOAD CONDITIONS FOR SOME TYPES OF ELECTRICAL BUSINESS EQUIPMENT (see 1.2.2.1 and 4.5.1)		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
L.7	Other business equipment		P

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Clause	Requirement – Test	Result – Remark	Verdict
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	Ringing 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 2.10.3.4, 6.2.2.1, 7.3.2 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		N/A
Q	ANNEX Q, BIBLIOGRAPHY		N/A
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)		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
			—

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Clause	Requirement – Test	Result – Remark	Verdict
U	ANNEX U, INSULATED WINDING WIRES FOR USE WITHOUT INTERLEAVED INSULATION (see 2.10.5.4)		P
		Certified triple insulated used. See appended table 1.5.1	—
V	ANNEX V, AC POWER DISTRIBUTION SYSTEMS (see 1.6.1)		P
V.1	Introduction	Equipment is for TN power system.	P
V.2	TN power distribution systems	Considered.	P
V.3	TT power systems		N/A
V.4	IT power systems		N/A
W	ANNEX W, SUMMATION OF TOUCH CURRENTS		N/A
W.1	Touch current from electronic 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
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

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Appendix for product photo

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China National Accreditation Service for Conformity Assessment

LABORATORY ACCREDITATION CERTIFICATE

(Registration No. CNAS L5885)

Shenzhen Tianhai Test Technology Co., Ltd.

(Legal Entity: Shenzhen Tianhai Test Technology Co., Ltd.)

4B/F., Building A3, The Silicon Valley Power Intelligent Terminal Industrial Park, Guanlan Street, Longhua District, Shenzhen, Guangdong, China

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Effective Date：2019-01-22

Expiry Date：2025-01-21

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