

APPLICATION FOR TEST REPORT

On Behalf of

Prepared For : Tiandy Technologies Co., Ltd.

Address : NO.8, HAITAI HUAKE RD2 (OUTSIDE RING ROAD), HUAYUAN
NEW TECHNOLOGY INDUSTRIAL PARK, TIANJIN 300384 CHINA

Product Name : Network Video Recorder

Model : TC-NR1008M7-P2-T-V2.0, TC-NR4004M7-P1, TC-NR4004M7-P2,
TC-NR4008M7-P2, TC-NR4016M7-P2, TC-NR4004M7-S1,
TC-NR4008M7-S1, TC-NR4008M7-S2, TC-NR4016M7-S2,
TC-NR5005M7-S1, TC-NR5010M7-S1, TC-NR5020M7-S1,
TC-NR5040M7-S1, TC-NR5010M7-S2, TC-NR5020M7-S2,
TC-NR5040M7-S2, TC-NR5080M7-S2, TC-NR5005M7-P1,
TC-NR5010M7-P1, TC-NR5010M7-P2, TC-NR5020M7-P2,
TC-NR5040M7-P2, TC-R3105, TC-R3110, TC-R3120, TC-R3210,
TC-R3220

Prepared By : SHENZHEN POCE TECHNOLOGY CO., LTD.

Address : H Building, Hongfa Science And Technology Park, Tangtou, Shiyan,
Bao'An District, Shenzhen, China

Test Date : Jul. 13, 2018 – Jul. 16, 2018

Date of Report : Jul. 16, 2018

Report No. : POCE18071405TRS-R1

TEST REPORT

EN 60950-1

**Information technology equipment – Safety –
Part 1: General requirements**

Report reference No.: POCE18071405TRS-R1

Compiled by (+ signature) : Tony Mo / Project Engineer



Approved by (+ signature) : Machael Mo / Manager

Date of issue : Jul. 16, 2018

Testing laboratory

Name : SHENZHEN POCE TECHNOLOGY CO., LTD.

Address : H Building, Hongfa Science And Technology Park, Tangtou, Shiyan, Bao'an District, Shenzhen, China

Testing location : Same as above

Client

Name : Tiandy Technologies Co., Ltd.

Address : NO.8, HAITAI HUAKE RD2 (OUTSIDE RING ROAD), HUAYUAN NEW TECHNOLOGY INDUSTRIAL PARK, TIANJIN 300384 CHINA

Test specification

Standard : EN 60950-1: 2006+A11:2009+A1: 2010+A12: 2011+A2: 2013

Test procedure : CE LVD Schedule

Procedure deviation : N.A.

Non-standard test method : N.A.

Test item

Description : Network Video Recorder

Trademark : Tiandy

Model and/or type reference : TC-NR1008M7-P2-T-V2.0, TC-NR4004M7-P1, TC-NR4004M7-P2, TC-NR4008M7-P2, TC-NR4016M7-P2, TC-NR4004M7-S1, TC-R3220, TC-NR4008M7-S1, TC-NR4008M7-S2, TC-NR4016M7-S2, TC-NR5005M7-S1, TC-NR5010M7-S1, TC-NR5020M7-S1, TC-NR5040M7-S1, TC-NR5010M7-S2, TC-NR5020M7-S2, TC-NR5040M7-S2, TC-NR5080M7-S2, TC-NR5005M7-P1, TC-NR5010M7-P1, TC-NR5010M7-P2, TC-NR5020M7-P2, TC-NR5040M7-P2, TC-R3105, TC-R3110, TC-R3120, TC-R3210,

Manufacturer name : Tiandy Technologies Co., Ltd.

Address : NO.8, HAITAI HUAKE RD2 (OUTSIDE RING ROAD), HUAYUAN NEW TECHNOLOGY INDUSTRIAL PARK, TIANJIN 300384 CHINA

Rating(s) : 100-240V~, 50-60Hz, 4A

Particulars: test item vs. test requirements

Equipment mobility: Building-in equipment
Operating condition: Continuous operation
Tested for IT power systems.....: N.A.
IT testing, phase-phase voltage (V).....: N.A.
Class of equipment.....: Class II
Protection against ingress of water.....: IPX0

Test case verdicts

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

Testing

Date of receipt of test item: Jul. 13, 2018
Date(s) of performance of test: Jul. 13, 2018 – Jul. 16, 2018

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 item tested.

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

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

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

Remark:

1. Maximum operation temperature of the product is 40°C.

Copy of marking plate:

Note: Due to the similarity of rating labels, only above label is listed.

Summary of testing: N/A

EN 60950-1			
Clause	Requirement – Test	Result - Remark	Verdict
1	GENERAL		---
1.5	Components		---
1.5.1	Comply with the requirements of relevant IEC component standard	(see appended table 1.5.1)	P
1.5.2	Evaluation and testing of components	Complied with Provision	P
1.5.3	Thermal controls	No thermal control	N
1.5.4	Transformers		N
1.5.5	Interconnecting cables		P
1.5.6	Capacitors in primary circuits	No such capacitor used	N
1.5.7	Double or reinforced insulation bridged by components	No such resistance used	N
1.5.7.1	General	See below	N
1.5.7.2	Bridging capacitors	No such capacitors	N
1.5.7.3	Bridging resistors	No such resistors	N
1.5.8	Components in equipment for IT power systems	No such components	N
1.6	Power interface		---
1.6.1	AC power distribution systems		P
1.6.2	Input current	(see appended table 1.6.2)	P
1.6.3	Voltage limit of hand-held equipment	Not hand-held equipment	N
1.6.4	Neutral conductor		N
1.7	Marking and instructions		---
1.7.1	Power rating	Rating marking readily visible to operator. See below for details	P
	Rated voltage(s) or voltage range(s) (V)	100-240Vac	P
	Symbol for nature of supply for d.c.		N
	Rated frequency or frequency range (Hz)	50-60Hz	N
	Rated current (A)		P
	Manufacturer's name/Trademark	Tianjin Tiandy Digital Technology Co., Ltd.	P
	Type/model	TC-NR4008M7-P2	P
	Symbol of Class II		N
	Other symbols	Additional symbols/markings do not give rise to misunderstanding	P
	Certification marks	CE marking	P

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Clause	Requirement – Test	Result - Remark	Verdict
1.7.2	Safety instructions	See the product manual	P
1.7.3	Short duty cycles	Continuous operation	N
1.7.4	Supply voltage adjustment	Not connect to multiple rated voltage or frequencies	N
	Methods and means of adjustment; reference to installation instructions		N
1.7.5	Power outlets on the equipment		N
1.7.6	Fuse identification		N
1.7.7	Wiring terminals		---
1.7.7.1	Protective earthing and bonding terminals	No such terminals	N
1.7.7.2	Terminal for a.c. mains supply conductors		N
1.7.7.3	Terminal for d.c. mains supply conductors		N
1.7.8	Controls and indicators		---
1.7.8.1	Identification, location and marking		N
1.7.8.2	Colours		N
1.7.8.3	Symbols according to IEC 60417	Considered	P
1.7.8.4	Markings using figures	No such marking	N
1.7.9	Isolation of multiple power sources	Single power source	N
1.7.10	IT power system		N
1.7.11	Thermostats and other regulating devices		N
1.7.12	Language	In English	P
1.7.13	Durability	The marking(s) withstand the required test. See table 1.7.13	P
1.7.14	Removable parts	No removable parts	N
1.7.15	Replaceable batteries	No batteries used	N
	Language.....		N
1.7.16	Operator access with a tool.....	There are no operator accessible areas with a tool defined.	N
1.7.17	Equipment for restricted access locations.....		N
2	PROTECTION FROM HAZARDS		---
2.1	Protection from electric shock and energy hazards	Operator only has access to SELV circuits	N
2.1.1	Protection in OPERATOR access areas		P
2.1.1.1	Access to energized parts	Cannot touch hazardous live parts	P
	Test by inspection		P
	Test with test finger	Cannot touch hazardous live parts	P

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Clause	Requirement – Test	Result - Remark	Verdict
	Test with test pin	Cannot touch hazardous live parts	P
	Test with test probe	No TNV	N
2.1.1.2	Battery compartments	No battery compartments	N
2.1.1.3	Access to ELV wiring	No ELV wiring	N
	Working voltage (V); distance (mm) through insulation		N
2.1.1.4	Access to hazardous voltage circuit wiring	No hazardous voltage circuit wiring	N
2.1.1.5	Energy hazards	<<240VA	P
2.1.1.6	Manual controls	No such controls	N
2.1.1.7	Discharge of capacitors in the primary circuit		N
	Time-constant (s); measured voltage (V)		N
2.1.2	Protection in service access areas	No service access areas	N
2.1.3	Protection in restricted access locations	No restricted access location	N
2.2	SELV circuits		---
2.2.1	General requirements	The internal circuits of camera were tested as SELV circuit	P
2.2.2	Voltages under normal conditions (V)	Input voltage is 24Vac, not exceed 42.4V peak or 60V dc in SELV circuit.	P
2.2.3	Voltages under fault conditions (V)	Not exceed 42.4V peak or 60V dc in SELV circuit	P
2.2.4	Connection of SELV circuits to other circuits	No such circuits	N
2.3	TNV circuits (No TNV circuits)		N
2.3.1	Limits		N
	Type of TNV circuits		N
2.3.2	Separation from other circuits and from accessible parts		N
	Insulation employed		N
2.3.3	Separation from hazardous voltages		N
	Insulation employed		N
2.3.4	Connection of TNV circuits to other circuits		N
	Insulation employed		N
2.3.5	Test for operating voltages generated externally		N
2.4	Limited current circuits		---
2.4.1	General requirements		N

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Clause	Requirement – Test	Result - Remark	Verdict
2.4.2	Limit values		N
	Frequency (Hz).....:		N
	Measured current (mA)		N
	Measured voltage (V)		N
	Measured capacitance (μ F)		N
2.4.3	Connection of limited current circuits to other circuits		N
2.5	Limited power sources		---
	Inherently limited output		N
	Impedance limited output	No such impedance	N
	Over current protective device limited output		N
	Regulating network limited output under normal operating and single fault condition		N
	Regulating network limited output under normal operating conditions and over current protective device limited output under single fault condition		N
	Output voltage (V), output current (A), apparent power (VA)..... :		N
	Current rating of over current protective device (A)		N
2.6	Provisions for earthing and bonding		---
2.6.1	Protective earthing		N
2.6.2	Functional earthing		P
2.6.3	General		N
2.6.3.1	Protective earthing and protective bonding conductors		N
2.6.3.2	Size of protective earthing conductors		N
	Rated current (A), cross-sectional area (mm^2), AWG		N
2.6.3.3	Size of protective bonding conductors		N
	Rated current (A), cross-sectional area (mm^2), AWG		N
2.6.3.4	Rated current (A), type and nominal thread diameter (mm)		N
	Resistance (Ω) of earthing conductors and their terminations, test current (A)		N
2.6.3.5	Colour of insulation.....:		N
2.6.4	Terminals		N
2.6.4.1	General		N
2.6.4.2	Protective earthing and bonding terminals		N

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Clause	Requirement – Test	Result - Remark	Verdict
	Rated current (A), type and nominal thread diameter (mm)		---
2.6.4.3	Separation of the protective earthing conductor from protective bonding conductors		N
2.6.5	Integrity of protective earthing		N
2.6.5.1	Interconnection of equipment		N
2.6.5.2	Components in protective earthing conductors and protective bonding conductors		N
2.6.5.3	Disconnection of protective earth		N
2.6.5.4	Parts that can be removed by an operator		N
2.6.5.5	Parts removed during servicing		N
2.6.5.6	Corrosion resistance	See annex J	N
2.6.5.7	Screws for protective bonding		N
2.6.5.8	Reliance on telecommunication network		N
2.7	Overcurrent and earth fault protection in primary circuits		---
2.7.1	Basic requirements		N
	Instructions when protection relies on building installation		N
2.7.2	Faults not covered in 5.3		N
2.7.3	Short-circuit backup protection		N
2.7.4	Number and location of protective devices		N
2.7.5	Protection by several devices		N
2.7.6	Warning to service personnel.....		N
2.8	Safety interlocks (No safety interlock used)		---
2.8.1	General principles		N
2.8.2	Protection requirements		N
2.8.3	Inadvertent reactivation		N
2.8.4	Fail-safe operation		N
2.8.5	Interlocks with moving parts		N
2.8.6	Overriding an interlock		N
2.8.7	Switches and relays in interlock systems		N
2.8.7.1	Contact gaps (mm)		N
2.8.7.2	Overload test		N
2.8.7.3	Endurance test		N
2.8.7.4	Electric strength test (V)		N
2.8.8	Mechanical actuators		N

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Clause	Requirement – Test	Result - Remark	Verdict
2.9	Electrical insulation		---
2.9.1	Properties of insulating materials	Suitable material according to their thermal electrical and mechanical properties	P
2.9.2	Humidity conditioning	48 hrs	P
	Humidity (%)	93%	---
	Temperature (°C)	25°C	---
2.9.3	Grade of insulation	Basic insulation and reinforced insulation	P
2.10	Clearances, creepage distances and distances through insulation		---
2.10.1	General		P
2.10.2	Determination of working voltage	See appended tables 2.10.3	P
2.10.3	Clearances		P
2.10.3.1	General		P
2.10.3.2	Clearances in primary circuit		P
2.10.3.3	Clearances in secondary circuits	(see appended table 2.10.3 and 2.10.4)	P
2.10.3.4	Measurement of transient levels		N
2.10.4	Creepage distances	(see appended table 2.10.3 and 2.10.4)	P
	CTI tests	the worst case	N
2.10.5	Solid insulation	See below	P
2.10.5.1	Minimum distance through insulation	(see appended table 2.10.5)	P
2.10.5.2	Thin sheet material		P
	Number of layers (pcs)		P
	Electric strength test	(see appended table 5.2)	P
2.10.5.3	Printed boards		N
	Distance through insulation		N
	Electric strength test for thin sheet insulating material		N
	Number of layers (pcs)		N
2.10.5.4	Wound components		N
	Number of layers (pcs)		N
	Two wires in contact inside component; angle between 45° and 90°		N
2.10.6	Coated printed boards		N
2.10.6.1	General		N
2.10.6.2	Sample preparation and preliminary inspection		N
2.10.6.3	Thermal cycling		N

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Clause	Requirement – Test	Result - Remark	Verdict
2.10.6.4	Thermal ageing (°C)		N
2.10.6.5	Electric strength test	(See appended table 5.2)	---
2.10.6.6	Abrasion resistance test		N
	Electric strength test	(See appended table 5.2)	---
2.10.7	Enclosed and sealed parts	No hermetically sealed component	N
	Temperature $T_1=T_2 = T_{mra} - T_{amb} + 10K$ (°C)		N
2.10.8	Spacings filled by insulating compound		N
	Electric strength test		N
2.10.9	Component external terminations		N
2.10.10	Insulation with varying dimensions	No distance reduction applied for	N
3	WIRING, CONNECTIONS AND SUPPLY		---
3.1	General		P
3.1.1	Current rating and overcurrent protection		P
3.1.2	Protection against mechanical damage	Complied with requirement	P
3.1.3	Securing of internal wiring		P
3.1.4	Insulation of conductors	(See appended table 5.2)	P
3.1.5	Beads and ceramic insulators		N
3.1.6	Screws for electrical contact pressure	No any screw used	N
3.1.7	Non-metallic materials in electrical connections		N
3.1.8	Self-tapping and spaced thread screws		P
3.1.9	Termination of conductors		N
	10 N pull test		N
3.1.10	Sleeving on wiring		P
3.2	Connection to a.c. mains supplies		---
3.2.1	Means of connection :	Connection to AC/DC adapter	P
3.2.1.1	Connection to an a.c. mains supply		P
3.2.1.2	Connection to an d.c. mains supply		N
3.2.2	Multiple supply connections		N
3.2.3	Permanently connected equipment		N
	Number of conductors, diameter (mm) of cable and conduits		N
3.2.4	Appliance inlets		N
3.2.5	Power supply cords		P
3.2.5.1	AC power supply cords		P
	Type.....		P

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Clause	Requirement – Test	Result - Remark	Verdict
	Rated current (A), cross-sectional area (mm ²), AWG		P
3.2.5.2	DC power supply cords		N
3.2.6	Cord anchorages and strain relief		N
	Mass of equipment (kg), pull (N)		N
	Longitudinal displacement (mm)		---
3.2.7	Protection against mechanical damage		P
3.2.8	Cord guards		P
	D (mm); test mass (g)		P
	Radius of curvature of cord (mm).....		P
3.2.9	Supply wiring space		N
3.3	Wiring terminals for connection of external conductors		---
3.3.1	Wiring terminals	No such terminals	N
3.3.2	Connection of non-detachable power supply cords		N
3.3.3	Screw terminals		N
3.3.4	Conductor sizes to be connected		N
	Rated current (A), cord/cable type, cross-sectional area (mm ²)		---
3.3.5	Wiring terminal design		N
	Rated current (A), type and nominal thread diameter (mm)		N
3.3.6	Wiring terminals design		N
3.3.7	Grouping of wiring terminals		N
3.3.8	Stranded wire		N
3.4	Disconnection from the a.c. mains supply		---
3.4.1	General requirement		P
3.4.2	Disconnect devices	Adapter used	P
3.4.3	Permanently connected equipment	Not permanently connected equipment	N
3.4.4	Parts which remain energized		N
3.4.5	Switches in flexible cords		N
3.4.6	Single-phase equipment		N
3.4.7	Three-phase equipment		N
3.4.8	Switches as disconnect devices		N
3.4.9	Plugs as disconnect devices		N
3.4.10	Interconnected equipment		N
3.4.11	Multiple power sources		N

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Clause	Requirement – Test	Result - Remark	Verdict
3.5	Interconnection of equipment		---
3.5.1	General requirements	Connected with other equipment	P
3.5.2	Types of interconnection circuits.....:	SELV circuit	P
3.5.3	ELV circuits as interconnection circuits	No ELV interconnection	N
4	PHYSICAL REQUIREMENTS		---
4.1	Stability		P
	Angle of 10°		P
	Test: force (N).....:		P
4.2	Mechanical strength		---
4.2.1	General		P
4.2.2	Steady force test, 10 N	No hazards	P
4.2.3	Steady force test, 30 N	No internal enclosure	N
4.2.4	Steady force test, 250 N	No hazards	P
4.2.5	Impact test	No hazards	P
	Fall test	No hazards as result from steel impact test from 1.3m	P
	Swing test		---
4.2.6	Drop test		N
4.2.7	Stress relief		N
4.2.8	Cathode ray tubes	No Cathode ray tube.	N
	Picture tube separately certified.....:		N
4.2.9	High pressure lamps	No high pressure lamps.	N
4.2.10	Wall or ceiling mounted equipment; force (N) ...:	Not wall or ceiling mounted	N
4.3	Design and construction		---
4.3.1	Edges and corners	All edges and corners judged to be sufficiently well rounded so as not to constitute a hazard,	P
4.3.2	Handles and manual controls; force (N).....:		N
4.3.3	Adjustable controls		N
4.3.4	Securing of parts	Mechanical fixing 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

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Clause	Requirement – Test	Result - Remark	Verdict
4.3.6	Direct plug-in equipment		N
	Dimensions(mm) of mains plug for direct plug-in::		N
	Torque and pull test of mains plug for direct plug-in; torque(Nm); pull(N).....:		---
4.3.7	Heating elements in earthed equipment	No such element	N
4.3.8	Batteries		N
4.3.9	Oil and grease		N
4.3.10	Dust, powders, liquids and gases		N
4.3.11	Containers for liquids or gases		N
4.3.12	Flammable liquids.....:	No flammable liquid	N
	Quantity of liquid (l).....:		N
	Flash point (°C)		N
4.3.13	Radiation; type of radiation	No any radiation	N
4.3.13.1	General		N
	Ionizing radiation		N
	Measured radiation (pA/kg)		---
	Measured high-voltage (kV)		--
	Measured focus voltage (kV)		---
	CRT markings		N
4.3.13.3	Effect of ultraviolet (UV) radiation on materials		N
	Part, property, retention after test, flammability classification		N
4.3.13.4	Human exposure to ultraviolet (UV) radiation		N
4.3.13.5	Laser (including LEDs)		N
	Laser class		---
4.3.13.6	Other types		N
4.4	Protection against hazardous moving parts	(No moving parts)	---
4.4.1	General	No hazards moving parts;	N
4.4.2	Protection in operator access areas		N
4.4.3	Protection in restricted access locations		N
4.4.4	Protection in service access areas		N
4.5	Thermal requirements		---
4.5.1	Temperature rises	Operated in the most unfavorable way of operation given in the operating instructions until steady conditions established	P

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Clause	Requirement – Test	Result - Remark	Verdict
	Normal load condition per Annex L	See appended table 4.5.1	P
4.5.2	Resistance to abnormal heat	Ball-pressure test of thermoplastic parts was performed, See appended table 4.5.2	P
4.6	Openings in enclosures		---
4.6.1	Top and side openings	No openings on the side	N
	Dimensions (mm)		N
4.6.2	Bottoms of fire enclosures		N
	Construction of the bottom	No openings on the bottom	N
4.6.3	Doors or covers in fire enclosures		N
4.6.4	Openings in transportable equipment		N
4.6.5	Adhesives for constructional purposes		N
	Conditioning temperature (°C)/time (weeks)		N
4.7	Resistance to fire		---
4.7.1	Reducing the risk of ignition and spread of flame	No excessive temperatures. No easily burning materials employed. Safety relevant components used within their specified temperature limits.	P
	Method 1, selection and application of components wiring and materials	See table 4.7	P
	Method 2, application of all of simulated fault condition tests		N
4.7.2	Conditions for a fire enclosure		---
4.7.2.1	Parts requiring a fire enclosure		N
4.7.2.2	Parts not requiring a fire enclosure		N
4.7.3	Materials		---
4.7.3.1	General		P
4.7.3.2	Materials for fire enclosures		N
4.7.3.3	Materials for components and other parts outside fire enclosures		N
4.7.3.4	Materials for components and other parts inside fire enclosures	PCB rated V-0	P
4.7.3.5	Materials for air filter assemblies	No air filter assemblies	N
4.7.3.6	Materials used in high-voltage components	No high-voltage component	N
5	ELECTRICAL REQUIREMENTS AND SIMULATED ABNORMAL CONDITIONS		---
5.1	Touch current and protective conductor current		---

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Clause	Requirement – Test	Result - Remark	Verdict
5.1.1	General		N
5.1.2	Equipment under test (EUT)		N
5.1.3	Test circuit		N
5.1.4	Application of measuring instrument		N
5.1.5	Test procedure		N
5.1.6	Test measurements		P
	Test voltage (V)		P
	Measured touch current (mA)	0.06mA	---
	Max. allowed touch current (mA)	3.5mA	---
	Measured protective conductor current (mA)		N
	Max. allowed protective conductor current (mA) :		N
5.1.7	Equipment with touch current exceeding 3.5 mA		N
5.1.8	Touch currents to and from telecommunication networks	No TNV	N
5.1.8.1	Limitation of the touch current to a telecommunication network		N
	Test voltage (V)		N
	Measured current (mA)		N
	Max. allowed current (mA)		N
5.1.8.2	Summation of touch currents from telecommunication networks	No TNV	N
5.2	Electric strength		---
5.2.1	General	(see appended table 5.2.2)	P
5.2.2	Test procedure	(see appended table 5.2.2)	P
5.3	Abnormal operating and fault conditions		---
5.3.1	Protection against overload and abnormal operation	(see appended table 5.3)	P
5.3.2	Motors		P
5.3.3	Transformers		N
5.3.4	Functional insulation.....		P
5.3.5	Electromechanical components	No electromechanical component.	N
5.3.6	Simulation of faults	(see appended table 5.3)	P
5.3.7	Unattended equipment		N

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Clause	Requirement – Test	Result - Remark	Verdict
5.3.8	Compliance criteria for abnormal operating and fault conditions	No fire propagated beyond the equipment, and no molten metal was emitted during the tests, electric strength tests passed after tests	P
6	CONNECTION TO TELECOMMUNICATION NETWORKS		---
6.1	Protection of telecommunication network service personnel, and users of other equipment connected to the network, from hazards in the equipment		N
6.1.1	Protection from hazardous voltages		N
6.1.2	Separation of the telecommunication network from earth		N
6.1.2.1	Requirements		N
	Test voltage (V)		N
	Current in the test circuit (mA)		N
6.1.2.2	Exclusions		N
6.2	Protection of equipment users from over voltages on telecommunication networks		---
6.2.1	Separation requirements		N
6.2.2	Electric strength test procedure		N
6.2.2.1	Impulse test		N
6.2.2.2	Steady-state test		N
6.2.2.3	Compliance criteria		N
6.3	Protection of telecommunication wiring system from overheating		---
	Max. output current (A).....		N
	Current limiting method		N
7	CONNECTION TO CABLE DISTRIBUTION SYSTEMS		---
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
7.2	Protection of equipment users from overvoltages on the cable distribution system		N
7.3	Insulation between primary circuits and cable distribution systems		N
7.3.1	General		N
7.3.2	Voltage surge test		N
7.3.3	Impulse test		N
A	ANNEX A, TESTS FOR RESISTANCE TO HEAT AND FIRE		---
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)		---

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Clause	Requirement – Test	Result - Remark	Verdict
A.1.1	Samples, material.....:		N
	Wall thickness (mm).....:		N
A.1.2	Conditioning of samples; temperature (°C).....:		N
	Mounting of samples:		N
A.1.4	Test flame		N
A.1.5	Test procedure		N
A.1.6	Compliance criteria		N
	Sample 1 burning time (s).....:		N
	Sample 2 burning time (s).....:		N
	Sample 3 burning time (s).....:		N
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)		---
A.2.1	Samples, material.....:		N
	Wall thickness (mm).....:		N
A.2.6	Compliance criteria		N
	Sample 1 burning time (s).....:		N
	Sample 2 burning time (s).....:		N
	Sample 3 burning time (s).....:		N
A.2.7	Alternative test acc. to IEC 60695-2-2, cl. 4, 8		N
	Sample 1 burning time (s).....:		N
	Sample 2 burning time (s).....:		N
	Sample 3 burning time (s).....:		N
A.3	High current arcing ignition test (see 4.7.3.2)		---
A.3.1	Samples, material.....:		N
	Wall thickness (mm).....:		N
A.3.5	Compliance criteria		N
	Sample 1 number of arcs to ignition (pcs).....:		N
	Sample 2 number of arcs to ignition (pcs).....:		N
	Sample 3 number of arcs to ignition (pcs).....:		N
	Sample 4 number of arcs to ignition (pcs).....:		N
	Sample 5 number of arcs to ignition (pcs).....:		N
A.4	Hot wire ignition test (see 4.7.3.2)		---
A.4.1	Samples, material.....:		N
	Wall thickness (mm).....:		N
A.4.5	Compliance criteria		N
	Sample 1 ignition time (s).....:		N

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Clause	Requirement – Test	Result - Remark	Verdict
	Sample 2 ignition time (s)..... :		N
	Sample 3 ignition time (s)..... :		N
	Sample 4 ignition time (s)..... :		N
	Sample 5 ignition time (s)..... :		N
A.5	Hot flaming oil test (see 4.6.2)		---
A.6	Flammability tests for classifying materials V-0, V-1 or V-2		---
A.6.1	Samples, material.....:		N
	Wall thickness (mm).....:		N
A.6.5	Compliance criteria		N
A.6.6	Permitted retest		N
A.7	Flammability test for classifying foamed materials HF-1, HF-2 or HFB		---
A.7.1	Sample, material.....:		N
	Wall thickness (mm).....:		N
A.7.4	Compliance criteria		N
A.7.5	Compliance criteria, HF-2		N
A.7.6	Compliance criteria, HF-1		N
A.7.7	Compliance criteria, HBF		N
A.7.8	Permitted retest, HF-1 or HF-2		N
A.7.9	Permitted retest, HBF		N
A.8	Flammability test for classifying materials HB		---
A.8.1	Samples, material.....:		N
	Sample thickness (mm).....:		N
A.8.2	Conditioning of samples; temperature (°C).....:		N
A.8.4	Test procedure		N
A.8.5	Compliance criteria		N
A.8.6	Permitted retest		N
A.9	Flammability test for classifying materials 5V		---
A.9.1	Samples, material.....:		N
	Sample thickness (mm).....:		N
A.9.4	Test procedure, test bars		N
A.9.5	Test procedure, test plaques		N
A.9.6	Compliance criteria		N
A.9.7	Permitted retest		N
A.10	Stress relief conditioning (see 4.2.7)		---
	Temperature (°C).....:		N
B	ANNEX B, MOTOR TESTS UNDER ABNORMAL CONDITIONS (see 4.7.2.2 and 5.3.2)		---

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Clause	Requirement – Test	Result - Remark	Verdict
B.1	General requirements	Motor used	P
	Position		P
	Manufacturer		P
	Type		P
	Rated values		P
B.2	Test conditions		P
B.3	Maximum temperatures		P
B.4	Running overload test		P
B.5	Locked-rotor overload test		P
	Test duration (days)		P
	Electric strength test: test voltage (V)		P
B.6	Running overload test for DC motors in secondary circuits		P
B.7	Locked-rotor overload test for DC motor in secondary circuits		---
B.7.1	Test procedure		P
B.7.2	Alternative test procedure; test time (h)		P
B.7.3	Electric strength test		P
B.8	Test for motors with capacitors		P
B.9	Test for three-phase motors		P
B.10	Test for series motors		P
	Operating voltage (V)		P

C	ANNEX C, TRANSFORMERS (see 1.5.4 and 5.3.3)		---
	Position		N
	Manufacturer		N
	Type		N
	Rated values		N
	Method of protection.....		N
C.1	Overload test		N
C.2	Insulation		N
	Protection from displacement of windings.....		N

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Clause	Requirement – Test	Result - Remark	Verdict
D	Annex D, MEASURING INSTRUMENTS FOR TOUCH-CURRENT TESTS (see 5.1.4)		---
D.1	Measuring instrument		N
D.2	Alternative measuring instrument		N
E	Annex E, TEMPERATURE RISE OF A WINDING (see 1.4.13)		N
F	Annex F, MEASUREMENT OF CLEARANCES AND CREEPAGE DISTANCES (see 2.10)		P
G	ANNEX G, ALTERNATIVE METHOD FOR DETERMINING MINIMUM CLEARANCES		---
G.1	Summary of the procedure for determining minimum clearances		---
G.2	Determination of mains transient voltage (V)		N
G.3	Determination of telecommunication network transient voltage (V)		N
G.4	Determination of required withstand voltage (V) ..		N
G.5	Measurement of transient levels (V)		N
G.6	Determination of minimum clearances		N
H	ANNEX H, IONIZING RADIATION (see 4.3.13)		---
	Ionizing radiation		N
	Measured radiation (mR/h)		N
	Measured high-voltage (kV)		N
	Measured focus voltage (kV)		N
	CRT markings		N
J	ANNEX J, TABLE OF ELECTROCHEMICAL POTENTIALS (see 2.6.5.6)		---
	Metal used		N
K	ANNEX K, THERMAL CONTROLS (see 1.5.3 and 5.3.7)		---
K.1	Making and breaking capacity		N
K.2	Thermostat reliability; operating voltage (V)		N
K.3	Thermostat endurance test; operating voltage (V)		N
K.4	Temperature limiter endurance; operating voltage (V)		N
K.5	Thermal cut-out reliability		N
K.6	Stability of operation		N

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Clause	Requirement – Test	Result - Remark	Verdict
L	Annex L, NORMAL LOAD CONDITIONS FOR SOME TYPES OF ELECTRICAL BUSINESS EQUIPMENT (see 1.2.2.1 and 4.5.1)		N
L.1	Typewriters		N
L.2	Adding machines and cash registers		N
L.3	Erasers		N
L.4	Pencil sharpeners		N
L.5	Duplicators and copy machines		N
L.6	Motor-operated files		N
L.7	Other business equipment		N
M	ANNEX M, CRITERIA FOR TELEPHONE RINGING SIGNALS (see 2.3.1)		---
M.2	Method A		N
M.3	Method B		N
M.3.1	Ringing signal		N
M.3.1.1	Frequency (f)		N
M.3.1.2	Voltage (V)		N
M.3.1.3	Cadence; time (s), voltage (V)		N
M.3.1.4	Single fault current (mA)		N
M.3.2	Tripping device and monitoring voltage		N
M.3.2.1	Conditions for use of a tripping device or a monitoring voltage		N
M.3.2.2	Tripping device		N
M.3.2.3	Monitoring voltage (V)		N
N	Annex N, IMPULSE TEST GENERATORS (see 2.10.3.4, 6.2.2.1, 7.3.2 and clause G.5)		N
N.1	ITU-T impulse test generators		N
N.2	IEC 60065 impulse test generator		N
	C: delete all the "country" notes that appear on the following pages of the reference document (IEC 60950:1999): 85, 91, 99, 103, 117, 119, 123, 125, 149, 171, 213, 215, 219, 251, 283, 325, 327, 331, 333 and 407		N
P	Annex P, NORMATIVE REFERENCES		P
	A (CH, SE): add the following: NOTE: Switches containing mercury such as thermostats, relays and level controllers are not allowed		N
Q	Annex Q, BIBLIOGRAPHY		P

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Clause	Requirement – Test	Result - Remark	Verdict
	S (NO): class I pluggable equipment type A intended for connection to other equipment or a communication network shall, if safety relies on connection to protective earth, require a marking stating that the equipment must be connected to an earthed mains socket outlet		N
R	Annex R, EXAMPLES OF REQUIREMENTS FOR QUALITY CONTROL PROGRAMMES		N
R.1	Minimum separation distances for unpopulated coated printed boards (see 2.10.6)		N
R.2	Reduced clearances (see 2.10.3)		N
	A (DK): Class II equipment shall not be fitted with socket-outlets for providing power to other equipment		N
S	Annex S, PROCEDURE FOR IMPULSE TESTING (see 6.2.2.3)		N
S.1	Test equipment		N
S.2	Test procedure		N
S.3	Examples of waveforms during impulse testing		N
	S (NO): requirements according to this annex, sub-clauses 1.7.2 and 6.1.2.1 apply		N
T	Annex T, GUIDANCE ON PROTECTION AGAINST INGRESS OF WATER (see 1.1.2)		N
		See separate test report	--
	S (NO): requirements according to this annex, sub-clauses 1.7.2 and 6.1.2.1 apply		N
U	Annex U, INSULATED WINDING WIRES FOR USE WITHOUT INTERLEAVED INSULATION (see 2.10.5.4)		N
	S (NO): due to the IT power distribution system used (see annex V, figure V.7), the a.c. mains supply voltage is considered to be equal to the line-to-line voltage, and will remain at 230 V in case of a single earth fault		N
V	Annex V, AC POWER DISTRIBUTION SYSTEMS (see 1.6.1)		N
V.1	Introduction		N
V.2	TN power distribution systems		N

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Clause	Requirement – Test	Result - Remark	Verdict
	S (GB): apparatus which is fitted with a flexible cable or cord and is designed to be connected to a mains socket conforming to BS 1363 by means of that flexible cable or cord and plug, shall be fitted with a "standard plug" in accordance with Statutory Instrument 1768:1994 – The Plugs and Sockets etc. (Safety) Regulations 1994, unless exempted by those regulations. NOTE: "Standard plug" is defined in SI 1768:1994 and essentially means an approved plug conforming to BS 1363 or an approved conversion plug		N
W	Annex W, SUMMATION OF TOUCH CURRENTS		N
W.1	Touch current from electronic circuits		N
W.1.2	Earthed circuits		N
W.2	Interconnection of several equipments		N
W.2.1	Isolation		N
W.2.2	Common return, isolated from earth		N
W.2.3	Common return, connected to protective earth		N
	S (IE): direct plug-in equipment is known as plug similar devices. Such devices shall comply with Statutory Instrument 526:1997 – National Standards Authority of Ireland (Section 28) (Electrical plugs, plug similar devices and sockets for domestic use) Regulations, 1997		N
X	Annex X, MAXIMUM HEATING EFFECT IN TRANSFORMER TESTS (see clause C.1)		N
X.1	Determination of maximum input current		N
X.2	Overload test procedure		N
	S (NO): due to the IT power distribution system used (see annex V, figure V.7), the a.c. mains supply voltage is considered to be equal to the line-to-line voltage, and will remain at 230 V in case of a single earth fault		N
Y	ANNEX Y, ULTRAVIOLET LIGHT CONDITIONING TEST (see 4.3.13.3)		N
Y.1	Test apparatus		N
Y.2	Mounting of test samples		N
Y.3	Carbon-arc light-exposure apparatus		N
Y.4	Xenon-arc light exposure apparatus		N

1.5.1	TABLE: list of critical components					P
object/part No.	manufacturer/trademark	type/model	technical data	standard	mark(s) of conformity ¹⁾	
Enclosure	TIANDY	---	Metal	---	---	
Switching power supply	FSP GROUP INC.	FSP250-60GNV	INPUT: 100-240V~, 4-2A, 50-60Hz, MAX 250W	---	CE	
Plug	Various	---	6A 250V~	---	VDE	
Power cord	---	227	300/300V 2×0.75mm ²	---	VDE	
DC brushless fan	Various	YM1208PTB 1	DC12V 0.2A	---	CE	
PCB	PLOTECH CO LTD	2	94V-0, 130°C	UL	UL E169497	
-Alternative	Various	Various	94V-0, 130°C	UL	UL	
Internal wire	Various	Various	28AWG, 30V, VW-1	UL	UL	
Insulating tube	Various	S-901-300	VW-1, 125°C	UL	UL E203436	

1.6.2	TABLE: Electrical data (in normal conditions)						P
Fuse #	I rated (A)	U (V)	P (W)	I (A)	I fuse (A)	Condition/status	
F1	4	90V/50Hz	238.5	2.65	2.65	Normal working	
F1	4	100V/50Hz	251.0	2.51	2.51	Normal working	
F1	4	240V/50Hz	247.2	1.03	1.23	Normal working	
F1	4	264V/50Hz	242.88	0.92	1.20	Normal working	
F1	4	90V/60Hz	228.6	2.54	2.54	Normal working	
F1	4	100V/60Hz	238.0	2.38	2.38	Normal working	
F1	4	240V/60Hz	242.4	1.01	1.12	Normal working	
F1	4	264V/60Hz	237.6	0.90	1.01	Normal working	
Supplementary information:							

1.7.13	TABLE: durability of marking test		P
Checked by	Time	Result	
Water	15s	No any curling and still legibility	
Petroleum spirit	15s	No any curling and still legibility	

2.1.1.7	TABLE: discharge test				N
Condition	calculated	calculated	T u →0V(s)	Comments	
Test voltage:					

2.2.3	TABLE: SELV voltage measurement		N
Location		Voltage measurement (V)	Comments
Comment:			

2.4.2	TABLE: limited current circuit measurement (No Y capacitor used)				N
Location	Voltage (V)	Current (mA)	Freq. (Hz)	Limit (mA)	Comments

2.5	TABLE: limited power source measurement			N
Condition	Output voltage (Uoc) (V)	Output current (Isc) (A)	Apparent power (S) (VA)	
Uoc: max output voltage, Isc: max. output current with any non-capacitive load, including a short circuit, measured 60s after application of the load, S(VA): max. output VA with any non-capacitive load, including a short circuit, measured 60s after application of the load				
Comment:				

2.9.2	TABLE: humidity test				P
Test condition:		Temperature	Relative Humidity	Duration	Breakdown (Y/N)
		25°C	93%	48 hours	N
Remark: after humidity test, electric strength test specified in clause 5.2.2 should be applied.					

2.10.5	TABLE: distance through insulation measurements				N
distance through insulation di at/of:		U peak (V)	test voltage (V)	required di (mm)	di (mm)

4.2.4	TABLE: enclosure push test				P
Test part	Pull force	Duration	Result	Breakdown (Y/N)	
Enclosure	250	10s	No hazardous	N	
Remark :					

4.2.5	TABLE: impact test			P
Test part	Method		Result	Breakdown (Y/N)
Enclosure	500g steel ball dropping though a vertical distance of 1,3m		No hazards	N

4.2.6	TABLE: drop test		N
Height	Horizontal surface	Result	

4.5	TABLE: Normal operation tests				P
Model:	Condition	Method A	Method B	---	
TC-NR1008M	test voltage (V)	240X1,1=264	100X0,9=90	---	
7-P2-T-V2.0	Test frequency (Hz).....	50	60	---	
	t1 (°C)	40	40	---	
	t2 (°C)	40	40	---	
temperature of part/at:	T (°C)			Tmax (°C)	
	A	B			
AC inlet	46.8	41.2		90	
Switch surface	48.2	40.3		90	
PCB	44,5	42,6		130	
Internal wire	45.8	42.7		80	
Insulating tube	45,3	42,0		125	
Fan surface	42.1	41.5		80	
Enclosure outside	41,7	41,3		70	
Note: maximum operation temperature at 40°C					
	Winding temperature rise measurements				
	Ambient temperature t1(°C) :	--		--	
	Ambient temperature t2(°C) :	--		--	
Temperature rise dT of winding	R1(Ω)	R2(Ω)	dt (k)	Insulation class	

4.5.2	TABLE: ball pressure test of thermoplastics			N
	required impression diameter (mm)	≤ 2 mm		---
part		test temperature (°C)	impression diameter (mm)	

5.1.6	TABLE: touch current measurement			P
Condition	Maximum current L→terminal (mA)	Maximum current N→terminal (mA)	Limited	
Accessible parts	<0,05	<0,05	3.5mA	
Input voltage:				

5.2.2	TABLE: electric strength tests and impulse tests			P
test voltage applied between:	test voltage (V r.m.s)		breakdown	
L&N and enclosure	3000Vac		No	
Live parts and enclosure	500Vac		No	

5.3	TABLE: fault condition tests (supplied by adaptor)					P
No.	component No.	fault	test voltage (V)	test time	Result	
1	U1 Pin2-3	S-C	242V	10mins	The unit shutdown, no damaged, no hazard, Recoverable	
2	Fan	locked-rotor	242V	10mins	The unit noraml working , no damaged, no hazard, Recoverable	
3	USB output	S-C	242V	10mins	The unit shutdown, no damaged, no hazard, Recoverable	
Remark: After this test, conducted electric strength test according to clause 5.2.2, and no any breakdown						

Attachments: real photos of EUT



Fig. 1



Fig. 2



Fig. 3



Fig. 4

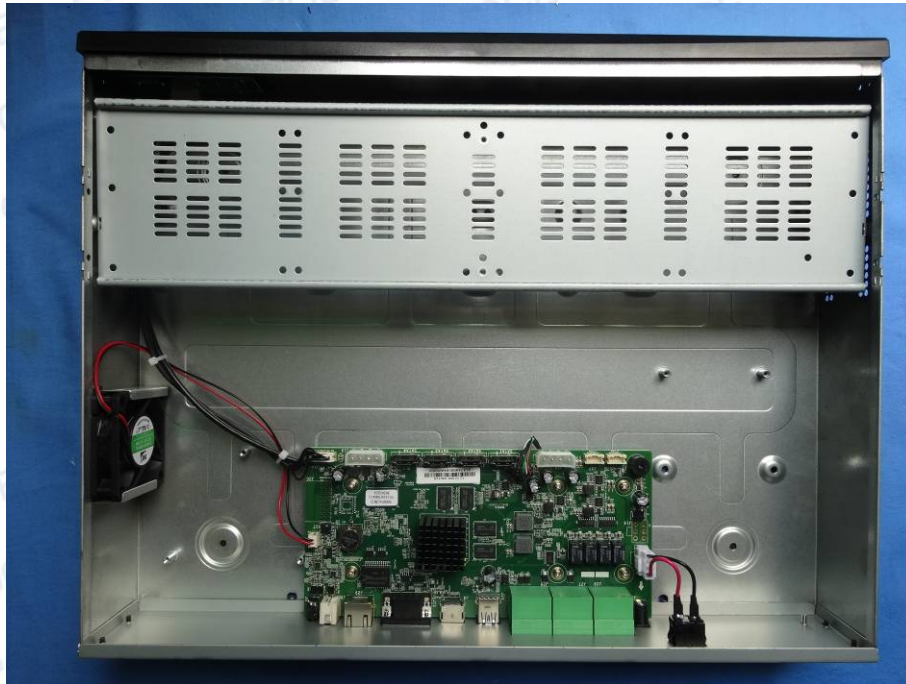


Fig. 5



Fig. 6

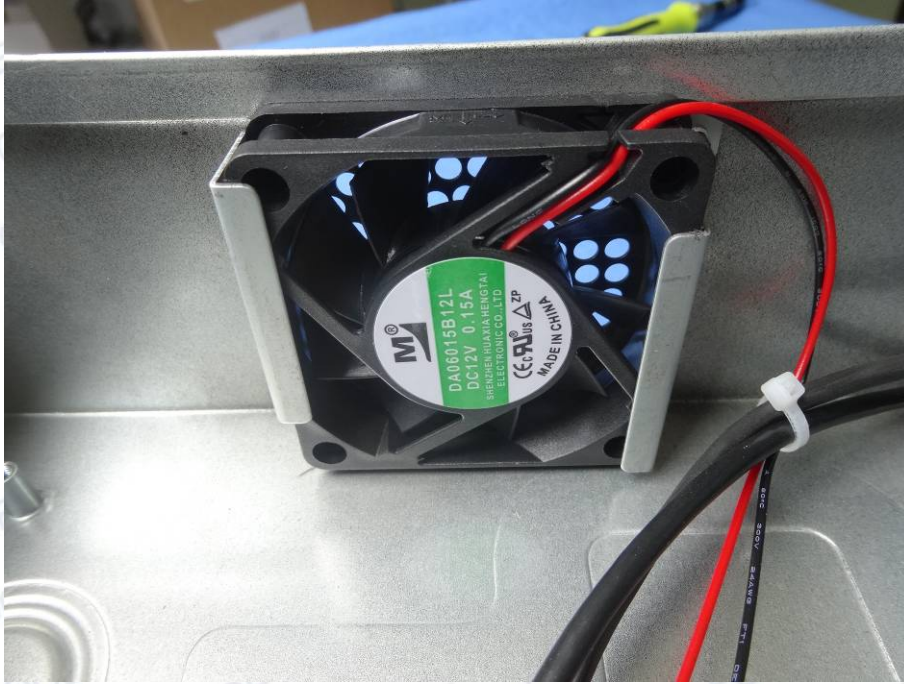


Fig. 7

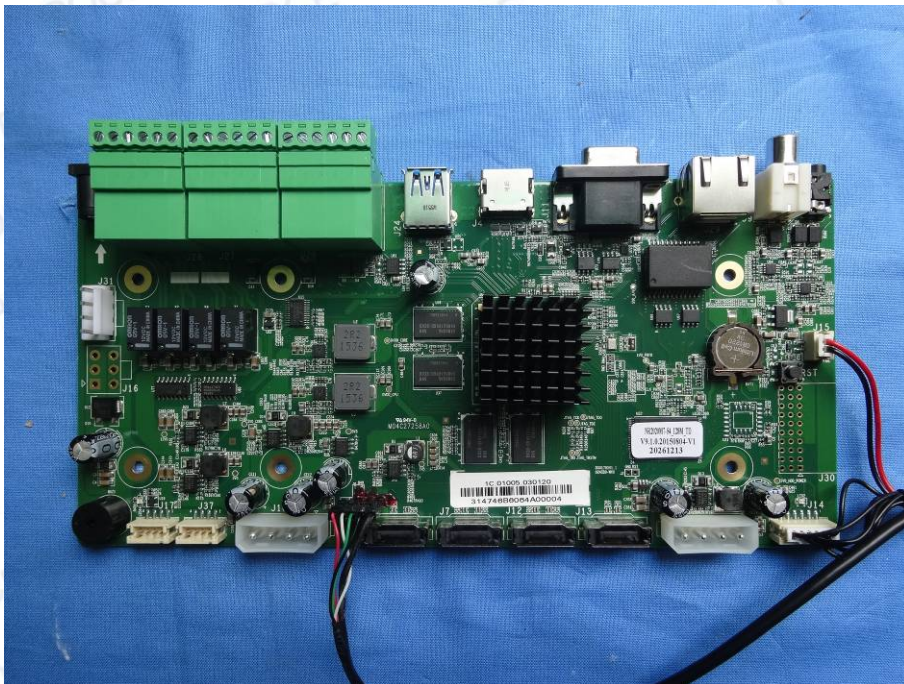


Fig. 8

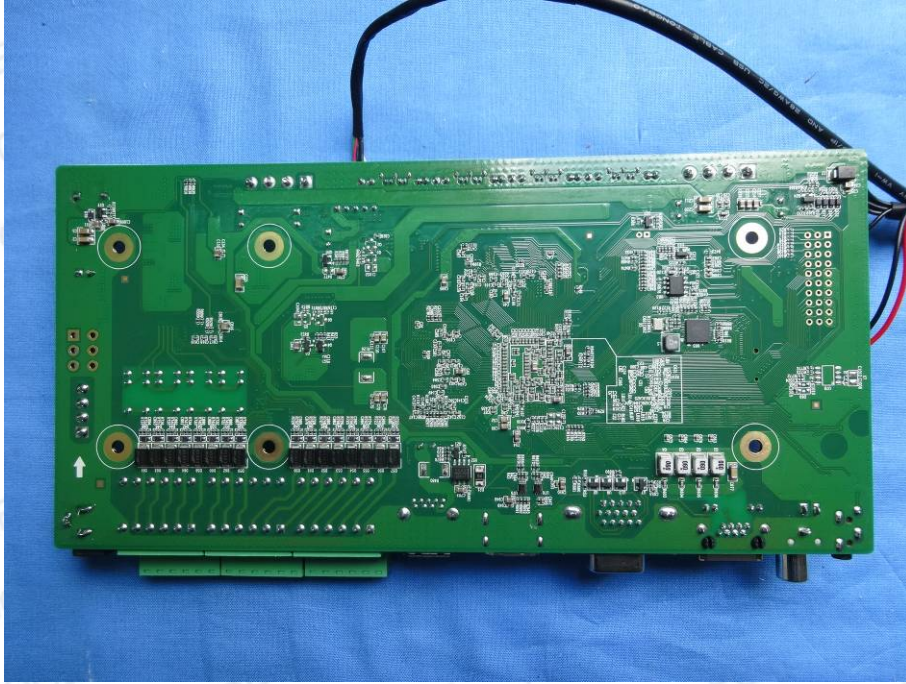


Fig. 9

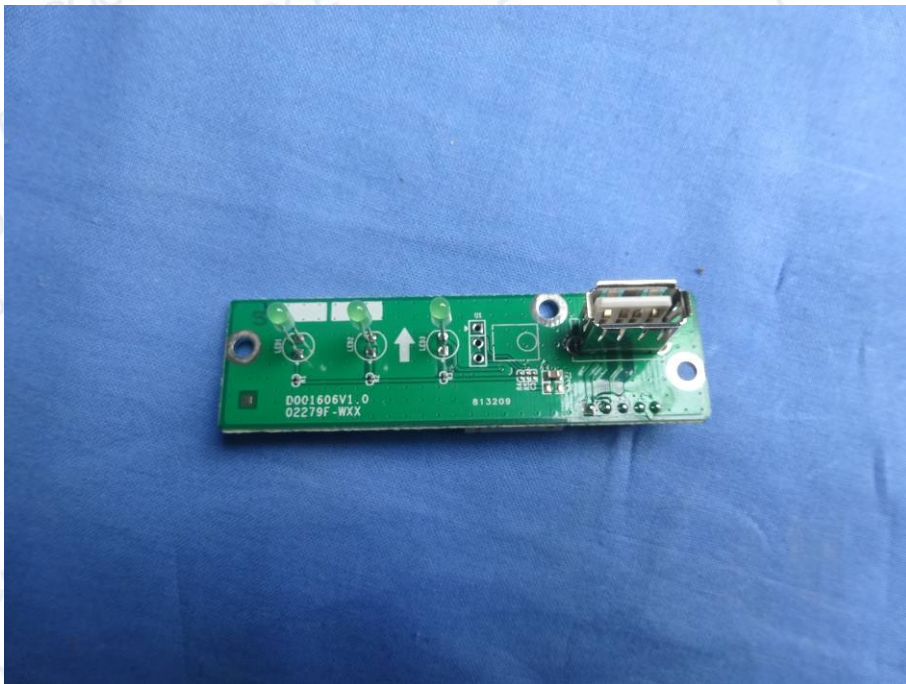


Fig. 10

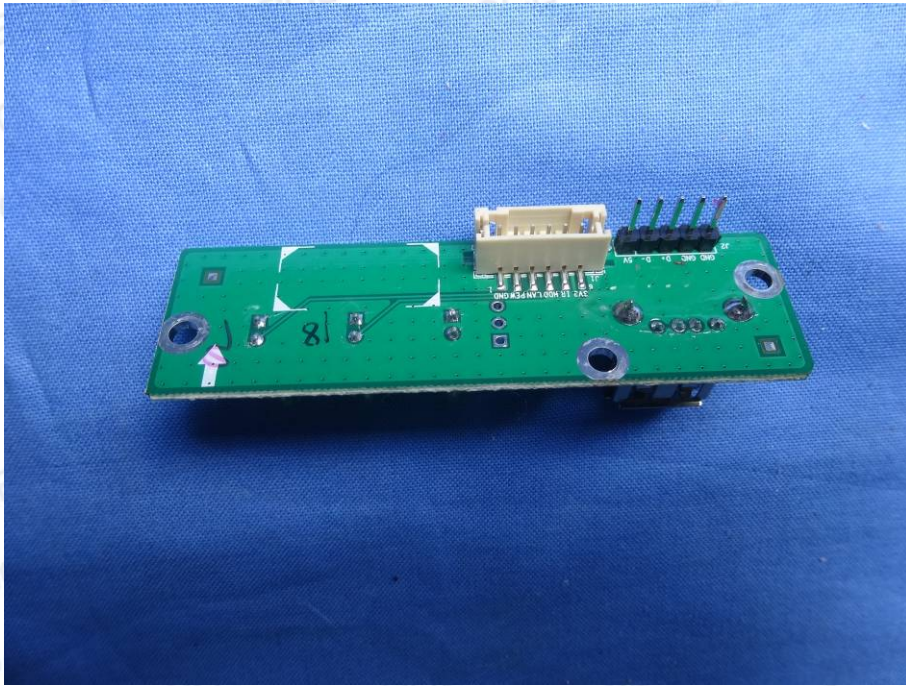


Fig. 11

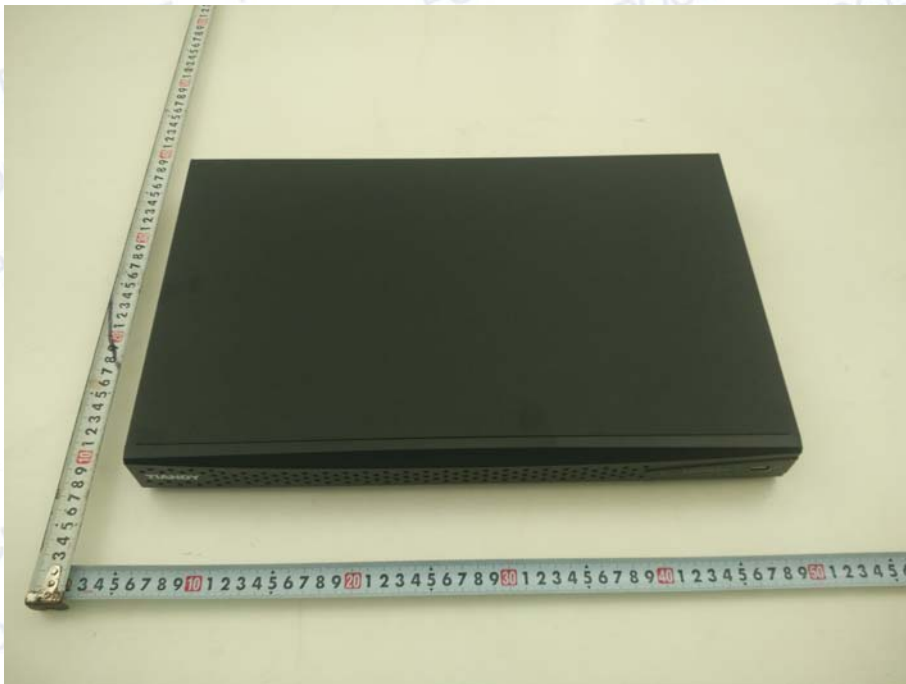


Fig. 12 (Model: TC-NR1016M7-P2)



Fig. 13 (Model: TC-NR1016M7-P4)

* * * THE END OF REPORT * * *