Test Report issued under the responsibility of:

TEST REPORT
IEC 62368-1
Audio/video, information and communication technology equipment
Part 1: Safety requirements

Report Number ..... :	SHES240801704001
Date of issue ..... :	2024-09-16
Total number of pages ..... :	62 pages
Name of Testing Laboratory preparing the Report ..... :	SGS-CSTC Standards Technical Services (Shanghai) Co., Ltd.
Applicant's name ..... :	Hangzhou Hikvision Digital Technology Co., Ltd.
Address ..... :	No. 555 Qianmo Road, Binjiang District, Hangzhou 310052, China
Test specification:	
Standard ..... :	IEC 62368-1:2014
Test procedure ..... :	CB Scheme
Non-standard test method ..... :	N/A
TRF template used ..... :	IECEE OD-2020-F1:2021, Ed.1.4
Test Report Form No. ..... :	IEC62368_1D
Test Report Form(s) Originator .. :	UL(US)
Master TRF ..... :	Dated 2022-04-14

This report is not valid as a CB Test Report unless signed by an approved CB Testing Laboratory and appended to a CB Test Certificate issued by an NCB in accordance with IECEE 02.

General disclaimer:

The test results presented in this report relate only to the object tested.
This report shall not be reproduced, except in full, without the written approval of the Issuing CB Testing Laboratory. The authenticity of this Test Report and its contents can be verified by contacting the NCB, responsible for this Test Report.

Test Item description ..... :		Tripod Turnstile	
Trade Mark(s) ..... :		HIKVISION	
Manufacturer..... :		Same as applicant	
Model/Type reference ..... :		See page 8-9	
Ratings ..... :		100-120 V a.c./200-240 V a.c., 50/60 Hz, 1,0 A-1,5 A; Class I	
Responsible Testing Laboratory (as applicable), testing procedure and testing location(s):			
☒	**CB Testing Laboratory:**	SGS-CSTC Standards Technical Services (Shanghai) Co., Ltd.	
Testing location/ address.....:		588 West Jindu Road, Xinqiao, Songjiang, 201612 Shanghai, China.	
Tested by (name, function, signature) .....:		Emilien Li Project Engineer	Emilien Li
Approved by (name, function, signature).....:		Leo Wang Reviewer	Leo Wang
☐	**Testing procedure: CTF Stage 1:**		
Testing location/ address..... :			
Tested by (name, function, signature) .....:			
Approved by (name, function, signature).....:			
☐	**Testing procedure: CTF Stage 2:**		
Testing location/ address.....:			
Tested by (name, function, signature) .....:			
Witnessed by (name, function, signature).....:			
Approved by (name, function, signature).....:			
☐	**Testing procedure: CTF Stage 3 :**		
☐	**Testing procedure: CTF Stage 4:**		
Testing location/ address.....:			
Tested by (name, function, signature) .....:			
Witnessed by (name, function, signature).....:			
Approved by (name, function, signature).....:			
Supervised by (name, function, signature) .....:			

List of Attachments (including a total number of pages in each attachment):

Attachment 1 – 28 pages of Photos documents;

Attachment 2 – 10 pages of European group differences and national differences.

Attachment 3 – 2 pages of Safety information.

Summary of testing:

The sample(s) tested complies with the requirements of IEC 62368-1: 2014 (Second Edition) and EN 62368-1:2014+A11:2017.

Unless otherwise specified, the EUT with model DS-K3G501BX-R and DS-K3G411BX-R were selected as representative model for full testing.

Heating test:

Tma = 65°C (declared by manufacturer) for power supply model name: PMT-24V150W2BA

Tma = 45°C (declared by manufacturer) for power supply model name: KPL-060M-VI

K-type thermocouple used for temperature measurement.

Tests performed (name of test and test clause):

☒ 4. General requirements

☒ 5. Electrically-caused injury

☒ 6. Electrically-caused fire

☒ 7. Injury caused by hazardous substances

☒ 8. Mechanically-caused injury

☒ 9. Thermal burn injury

☒10. Radiation

☒ Annex B. Normal operating condition tests, abnormal operating condition tests and single fault condition tests

☒ Annex F.3.9. Performance of Marking test

☒ Annex M Equipment containing batteries and their protection circuits

☒ Annex Q. Limited Power Source

☒ Annex T. Mechanical strength tests

☒ Annex V. Determination of accessible parts

Testing location:

SGS-CSTC Standards Technical Services (Shanghai) Co., Ltd.

588 West Jindu Road, Xinqiao, Songjiang, 201612 Shanghai, China

Summary of compliance with National Differences (List of countries addressed):

1. EU Group Differences (EN 62368-1:2014+A11:2017)
2. EU Special National Conditions, EU A-deviations: DE, DK, FI, GB, IE, NO, SE

Explanation of used codes: DE=Germany, DK=Denmark, FI=Finland, GB= United Kingdom, IE=Ireland, NO=Norway, SE=Sweden

☒ **The product fulfils the above requirements.**

Use of uncertainty of measurement for decisions on conformity (decision rule):

☒ No decision rule is specified by the IEC standard, when comparing the measurement result with the applicable limit according to the specification in that standard, The decisions on conformity are made without applying the measurement uncertainty (“simple acceptance” decision rule, previously known as “accuracy method”),

☐ Other:… (to be specified, for example when required by the standard or client, or if national accreditation requirements apply)

Information on uncertainty of measurement:

The uncertainties of measurement are calculated by the laboratory based on application of criteria given by OD-5014 for test equipment and application of test methods, decision sheets and operational procedures of IECEE,

IEC Guide 115 provides guidance on the application of measurement uncertainty principles and applying the decision rule when reporting test results within IECEE scheme, noting that the reporting of the measurement uncertainty for measurements is not necessary unless required by the test standard or customer,

Calculations leading to the reported values are on file with the NCB and testing laboratory that conducted the testing.

Copy of marking plate:

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

Marking for model DS-K3G411BX-R

Marking for model name: DS-K3G501BX-R

Remark:

1) The Height of CE logo shall not be less than 5 mm; Height of WEEE logo shall not be less than 7 mm.

2) The marking plates for other models are of the same pattern except for model name and Rating.

3) As declared by the applicant, the importer (and manufacturer, if it is different)'s name, registered trade name or registered trade mark and the postal address will be marked on the products before being placed on the market. The contact details shall be in a language easily understood by end-users and market surveillance authorities.

TEST ITEM PARTICULARS:	
Classification of use by.....:	☒ Ordinary person ☒ Instructed person ☒ Skilled person ☒ Children likely to be present
Supply Connection .....:	☒ AC Mains ☐ DC Mains ☐ External Circuit - not Mains connected -☐ ES1 ☐ ES2 ☐ ES3
Supply % Tolerance .....:	☒ +10%/-10% ☐ +20%/-15% ☐ other:
Supply Connection – Type .....:	☐ pluggable equipment type A - ☐ non-detachable supply cord ☐ appliance coupler ☐ direct plug-in ☐ mating connector ☐ pluggable equipment type B - ☐ non-detachable supply cord ☐ appliance coupler ☒ permanent connection ☐ mating connector ☐ other: not directly connected to mains
Considered current rating of protective device as part of building or equipment installation..... :	16 A; 20A Installation location: ☒ building; ☐ equipment
Equipment mobility..... :	☐ movable ☐ hand-held ☐ transportable ☒ stationary ☐ for building-in ☐ direct plug-in ☐ rack-mounting ☐ wall-mounted
Over voltage category (OVC) ..... :	☐ OVC I ☒ OVC II ☐ OVC III ☐ OVC IV ☐ other:
Class of equipment ..... :	☒ Class I ☐ Class II ☐ Class III ☐ Class II with functional earthing ☐ Not classifed
Access location ..... :	☐ restricted access location ☒ N/A
Pollution degree (PD) ..... :	☐ PD 1 ☒ PD 2 ☐ PD 3
Manufacturer's specified maxium operating ambient ..... :	See page 3
IP protection class ..... :	☒ IPX0 ☐
Power Systems ..... :	☒ TN ☒ TT ☐ IT - V L-L ☐ dc mains ☐ N/A
Altitude during operation (m) ..... :	☐ 2000 m or less ☒ 5000m
Altitude of test laboratory (m) ..... :	☒ 2000 m or less ☐ m

Mass of equipment (kg) ..... :	☐: (<=1kg); ☐: (<=7kg); ☐: (>7kg, <=25kg); ☒: 42,5kg (>25kg) for model name: DS-K3G501BX-R 22,8kg (>25kg) for model name: DS-K3G411BX-R
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 ..... :	2024-08-13
Date (s) of performance of tests ..... :	2024-08-13 to 2024-08-20
General remarks:	
"(See Enclosure #)" refers to additional information appended to the report. "(See appended table)" refers to a table appended to the report. **Throughout this report a ☒ comma / ☐ point is used as the decimal separator.** This document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at http://www.sgs.com/en/Terms-and-Conditions.aspx and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at http://www.sgs.com/en/Terms-and-Conditions/Terms-e-Document.aspx. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law. Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 30 days only.	
Manufacturer's Declaration per sub-clause 4.2.5 of IECEE 02:	
The application for obtaining a CB Test Certificate includes more than one factory location and a declaration from the Manufacturer stating that the sample(s) submitted for evaluation is (are) representative of the products from each factory has been provided ..... :	☒ Yes ☐ Not applicable Factory declaration letter.pdf, dated on 2024-01-15.
When differences exist; they shall be identified in the General product information section.	

Name and address of factory (ies).....:	1. Hangzhou Hikvision Technology Co., Ltd. No. 700, Dongliu Road, Binjiang District, Hangzhou City, Zhejiang, 310052, China 2. Hangzhou Hikvision Electronics Co., Ltd. No. 299, Qiushi Road, Tonglu Economic Development Zone, Tonglu County, Hangzhou, Zhejiang, 311500, China 3. Chongqing Hikvision technology Co., Ltd. No. 118, Haikang Road, Area C, Jianqiao Industrial Park, Dadukou District, Chongqing, 401325, China

General product information and other remarks:

Product Description –

Functions	The equipment under test is a Class I Tripod Turnstile which powered by certified built-in power supply. The top openings are reserved for facial recognition machines. The product contains a power supply during normal use, and it can be matched with two type power supplies (details see table 4.1.2). Only matched with power supply (model: PMT-24V150W2BA), the equipment contains heating module at the same time.
Material of enclosure	Metal & Plastic
Others	Indoor use only

Model / Type Ref

DS-K3G501BX-R	DS-K3G501BX-R/M	DS-K3G501BX-R/D
DS-K3G501BX-R/E	DS-K3G501BX-R/ED	DS-K3G501BLX-R
DS-K3G501BX-R 868	DS-K3G501BX-R/M 868	DS-K3G501BX-R/D 868
DS-K3G501BX-R/E 868	DS-K3G501BX-R/ED 868	DS-K3G501BLX-R 868
DS-K3G501BX-RUHK	DS-K3G501BX-RCKV	DS-K3G501BLX-RUVS
DS-K3G501BLX-RKVO	DS-K3G411BX-R	DS-K3G411BX-R/M
DS-K3G411BX-R/D	DS-K3G411BX-R/E	DS-K3G411BX-R/ED
DS-K3G411BLX-R	DS-K3G411BX-R 868	DS-K3G411BX-R/M 868
DS-K3G411BX-R/D 868	DS-K3G411BX-R/E 868	DS-K3G411BX-R/ED 868
DS-K3G411BLX-R 868	DS-K3G411BX-RUHK	DS-K3G411BX-RCKV
DS-K3G411BLX-RUVS	DS-K3G411BLX-RKVO	DS-K3G301BX-R
DS-K3G301BX-R/M	DS-K3G301BX-R/D	DS-K3G301BX-R/E
DS-K3G301BX-R/ED	DS-K3G301BLX-R	DS-K3G301BX-R 868
DS-K3G301BX-R/M 868	DS-K3G301BX-R/D 868	DS-K3G301BX-R/E 868
DS-K3G301BX-R/ED 868	DS-K3G301BLX-R 868	DS-K3G301BX-RUHK
DS-K3G301BX-RCKV	DS-K3G301BLX-RUVS	DS-K3G301BLX-RKVO
DS-K3G200BX-R	DS-K3G200BX-R/M	DS-K3G200BX-R/D
DS-K3G200BX-R/E	DS-K3G200BX-R/ED	DS-K3G200BLX-R
DS-K3G200BX-R 868	DS-K3G200BX-R/M 868	DS-K3G200BX-R/D 868
DS-K3G200BX-R/E 868	DS-K3G200BX-R/ED 868	DS-K3G200BLX-R 868

	DS-K3G200BX-RUHK	DS-K3G200BX-RCKV	DS-K3G200BLX-RUVS	
	DS-K3G200BLX-RKVO	--	--	

Model Differences –

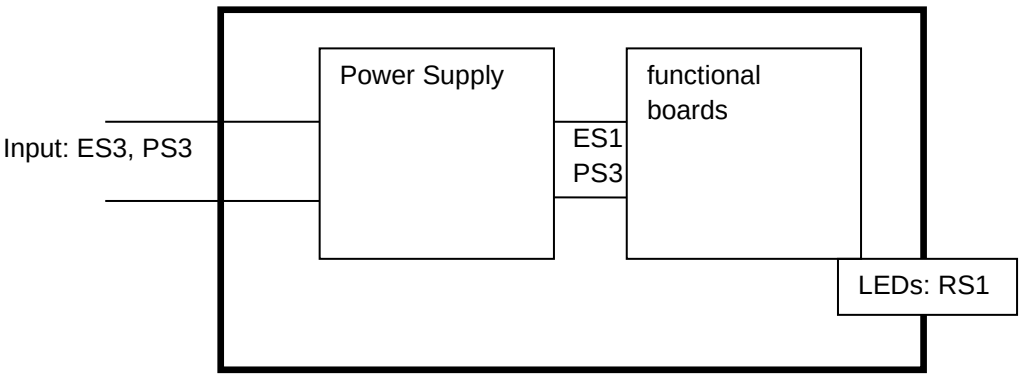
All “-501” series models are identical except model name which has no impact for safety.
All “-301” series models are identical except model name which has no impact for safety.
“-501” series and “-301” series have similar appearance, internal permission board and channel board, completely identical power supply, only different light board, and slightly higher power consumption for 501,
All “-411” series models are identical except model name which has no impact for safety.
All “-200” series models are identical except model name which has no impact for safety.
“-411” series and “-200” series have similar appearance, and the internal permission board and channel board have completely identical power supply, only the light board is different and slightly higher power consumption for 411.
“-501” series and “-411” series are identical except for model name, appearance and structure, see attachment 1.

Additional application considerations – (Considerations used to test a component or sub-assembly) –

N/A

ENERGY SOURCE IDENTIFICATION AND CLASSIFICATION TABLE:	
(Note 1: Identify the following six (6) energy source forms based on the origin of the energy.) (Note 2: The identified classification e.g., ES2, TS1, should be with respect to its ability to cause pain or injury on the body or its ability to ignite a combustible material. Any energy source can be declared Class 3 as a worse case classification e.g. PS3, ES3.	
Electrically-caused injury (Clause 5): (Note: Identify type of source, list sub-assembly or circuit designation and corresponding energy source classification) Example: +5 V dc input ES1	
Source of electrical energy	**Corresponding classification (ES)**
Primary circuit	ES3
Internal circuit except primary circuit	ES1
All accessible parts	ES1
Electrically-caused fire (Clause 6): (Note: List sub-assembly or circuit designation and corresponding energy source classification) Example: Battery pack (maximum 85 watts): PS2	
Source of power or PIS	**Corresponding classification (PS)**
Power input	PS3
All internal circuits	PS3
Injury caused by hazardous substances (Clause 7) (Note: Specify hazardous chemicals, whether produces ozone or other chemical construction not addressed as part of the component evaluation.) Example: Liquid in filled component Glycol	
Source of hazardous substances	**Corresponding chemical**
RTC Battery	RTC Lithium battery
Source of kinetic/mechanical energy	**Corresponding classification (MS)**
Sharp edges and corners	MS1
DC Fan	MS1
Equipment mass	MS3
Thermal burn injury (Clause 9) (Note: Identify the surface or support, and corresponding energy source classification based on type of part, location, operating temperature and contact time in Table 38.) Example: Hand-held scanner – thermoplastic enclosure TS1	
Source of thermal energy	**Corresponding classification (TS)**
All accessible parts	TS1
Radiation (Clause 10) (Note: List the types of radiation present in the product and the corresponding energy source classification.) Example: DVD – Class 1 Laser Product RS1	
Type of radiation	**Corresponding classification (RS)**
LEDs	RS1

ENERGY SOURCE DIAGRAM
Indicate which energy sources are included in the energy source diagram. Insert diagram below



Enclosure: ES1, MS1, TS1
Mass: MS3

■ **ES** ■ **PS** ■ **MS** ■ **TS** ■ **RS**

OVERVIEW OF EMPLOYED SAFEGUARDS				
Clause	**Possible Hazard**			
5.1	Electrically-caused injury			
Body Part (e.g. Ordinary)	Energy Source (ES3: Primary Filter circuit)	Safeguards		
		Basic	Supplementary	Reinforced (Enclosure)
Ordinary person	ES3: Power input	Basic Insulation	Protective Earthing	-
Ordinary person	ES1: Internal circuit except primary circuit	N/A	N/A	N/A
Ordinary person	ES1: All accessible parts	N/A	N/A	N/A
6.1	Electrically-caused fire			
Material part (e.g. mouse enclosure)	Energy Source (PS2: 100 Watt circuit)	Safeguards		
		Basic	Supplementary	Reinforced
Internal combustible materials	PS3: Internal circuits	1. No ignition occurred. 2. No parts exceeding 90% of its spontaneous ignition temperature. 3. combustible material outside fire enclosure is of min HB	1. PCB is of min V-1 material 2. All other components were mounted on min V-1 PCB or of min V-2 or small parts of combustible material less than 4g. 3. Fire enclosure provided	N/A
7.1	Injury caused by hazardous substances			
Body Part (e.g., skilled)	Energy Source (hazardous material)	Safeguards		
		Basic	Supplementary	Reinforced
Ordinary person	Lithium battery	N/A	N/A	Comply with Annex M
8.1	Mechanically-caused injury			
Body Part (e.g. Ordinary)	Energy Source (MS3:High Pressure Lamp)	Safeguards		
		Basic	Supplementary	Reinforced (Enclosure)

Ordinary person	MS1: Sharp edges and corners	N/A	N/A	N/A
Ordinary person	MS1: DC Fan	N/A	N/A	N/A
Ordinary person	MS3: Equipment mass	N/A	N/A	Fixed installation
9.1	Thermal Burn			
Body Part (e.g., Ordinary)	Energy Source (TS2)	Safeguards		
		Basic	Supplementary	Reinforced
Ordinary person	TS1: Accessible parts	N/A	N/A	N/A
10.1	Radiation			
Body Part (e.g., Ordinary)	Energy Source (Output from audio port)	Safeguards		
		Basic	Supplementary	Reinforced
Ordinary person	RS1: LEDs	N/A	N/A	N/A
Supplementary Information:				
(1) See attached energy source diagram for additional details. (2) “N” – Normal Condition; “A” – Abnormal Condition; “S” Single Fault				

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Clause	Requirement + Test	Result - Remark	Verdict
4	**GENERAL REQUIREMENTS**		P
4.1.1	Acceptance of materials, components and subassemblies		P
4.1.2	Use of components		P
4.1.3	Equipment design and construction		P
4.1.15	Markings and instructions.....:	(See Annex F)	P
4.4.4	Safeguard robustness		P
4.4.4.2	Steady force tests.....:	(See Annex T.2, T.5)	P
4.4.4.3	Drop tests .....:		N/A
4.4.4.4	Impact tests .....:	(See Annex T.6)	P
4.4.4.5	Internal accessible safeguard enclosure and barrier tests.....:		N/A
4.4.4.6	Glass Impact tests .....:		N/A
4.4.4.7	Thermoplastic material tests .....:	(See Annex T.8)	P
4.4.4.8	Air comprising a safeguard.....:		N/A
4.4.4.9	Accessibility and safeguard effectiveness		P
4.5	Explosion		P
4.6	Fixing of conductors		P
4.6.1	Fix conductors not to defeat a safeguard		P
4.6.2	10 N force test applied to .....:		P
4.7	Equipment for direct insertion into mains socket - outlets		N/A
4.7.2	Mains plug part complies with the relevant standard.....:		N/A
4.7.3	Torque (Nm) .....:		N/A
4.8	Products containing coin/button cell batteries	RTC was soldered on PCB	N/A
4.8.2	Instructional safeguard		N/A
4.8.3	Battery Compartment Construction		N/A
	Means to reduce the possibility of children removing the battery.....:		—
4.8.4	Battery Compartment Mechanical Tests .....:		N/A
4.8.5	Battery Accessibility		N/A
4.9	Likelihood of fire or shock due to entry of conductive object.....:	(See Annex P)	P
5	**ELECTRICALLY-CAUSED INJURY**		P
5.2.1	Electrical energy source classifications.....:	(See appended table 5.2)	P
5.2.2	ES1, ES2 and ES3 limits		P
5.2.2.2	Steady-state voltage and current.....:	See appended table 5.2	P

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Clause	Requirement + Test	Result - Remark	Verdict
5.2.2.3	Capacitance limits ..... :		N/A
5.2.2.4	Single pulse limits ..... :		N/A
5.2.2.5	Limits for repetitive pulses ..... :		N/A
5.2.2.6	Ringing signals ..... :		N/A
5.2.2.7	Audio signals ..... :		N/A
5.3	Protection against electrical energy sources		N/A
5.3.1	General Requirements for accessible parts to ordinary, instructed and skilled persons		N/A
5.3.2.1	Accessibility to electrical energy sources and safeguards		N/A
5.3.2.2	Contact requirements		N/A
	a) Test with test probe from Annex V ..... :		N/A
	b) Electric strength test potential (V) ..... :		N/A
	c) Air gap (mm) ..... :		N/A
5.3.2.4	Terminals for connecting stripped wire		N/A
5.4	Insulation materials and requirements		P
5.4.1.2	Properties of insulating material		P
5.4.1.3	Humidity conditioning ..... :	(See sub-clause 5.4.8)	P
5.4.1.4	Maximum operating temperature for insulating materials ..... :	(See appended table 5.4.1.4)	P
5.4.1.5	Pollution degree ..... :	2	—
5.4.1.5.2	Test for pollution degree 1 environment and for an insulating compound		N/A
5.4.1.5.3	Thermal cycling		N/A
5.4.1.6	Insulation in transformers with varying dimensions		N/A
5.4.1.7	Insulation in circuits generating starting pulses		N/A
5.4.1.8	Determination of working voltage	Internal approved power supply	P
5.4.1.9	Insulating surfaces		P
5.4.1.10	Thermoplastic parts on which conductive metallic parts are directly mounted	Internal approved power supply	P
5.4.1.10.2	Vicat softening temperature..... :		N/A
5.4.1.10.3	Ball pressure ..... :	Internal approved power supply	P
5.4.2	Clearances		P
5.4.2.2	Determining clearance using peak working voltage		N/A
5.4.2.3	Determining clearance using required withstand voltage ..... :		P
	a) a.c. mains transient voltage ..... :	2500	—
	b) d.c. mains transient voltage ..... :		—
	c) external circuit transient voltage ..... :		—

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Clause	Requirement + Test	Result - Remark	Verdict
	d) transient voltage determined by measurement ..... :		—
5.4.2.4	Determining the adequacy of a clearance using an electric strength test		N/A
5.4.2.5	Multiplication factors for clearances and test voltages ..... :	1,48	P
5.4.3	Creepage distances ..... :	Internal approved power supply	P
5.4.3.1	General		P
5.4.3.3	Material Group ..... :	IIIb	—
5.4.4	Solid insulation		P
5.4.4.2	Minimum distance through insulation ..... :		N/A
5.4.4.3	Insulation compound forming solid insulation		N/A
5.4.4.4	Solid insulation in semiconductor devices		N/A
5.4.4.5	Cemented joints		N/A
5.4.4.6	Thin sheet material	Internal approved power supply	P
5.4.4.6.1	General requirements		N/A
5.4.4.6.2	Separable thin sheet material		N/A
	Number of layers (pcs) ..... :		N/A
5.4.4.6.3	Non-separable thin sheet material		N/A
5.4.4.6.4	Standard test procedure for non-separable thin sheet material ..... :		N/A
5.4.4.6.5	Mandrel test		N/A
5.4.4.7	Solid insulation in wound components	Internal approved power supply	P
5.4.4.9	Solid insulation at frequencies >30 kHz ..... :		N/A
5.4.5	Antenna terminal insulation		N/A
5.4.5.1	General		N/A
5.4.5.2	Voltage surge test		N/A
	Insulation resistance (MΩ)..... :		—
5.4.6	Insulation of internal wire as part of supplementary safeguard ..... :		N/A
5.4.7	Tests for semiconductor components and for cemented joints		N/A
5.4.8	Humidity conditioning	approved internal power supply	P
	Relative humidity (%)..... :		—
	Temperature (°C) ..... :		—
	Duration (h) ..... :		—
5.4.9	Electric strength test ..... :	(See appended table 5.4.9)	P
5.4.9.1	Test procedure for a solid insulation type test		P
5.4.9.2	Test procedure for routine tests		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
5.4.10	Protection against transient voltages between external circuit		N/A
5.4.10.1	Parts and circuits separated from external circuits		N/A
5.4.10.2	Test methods		N/A
5.4.10.2.1	General		N/A
5.4.10.2.2	Impulse test .....:		N/A
5.4.10.2.3	Steady-state test.....:		N/A
5.4.11	Insulation between external circuits and earthed circuitry .....:		N/A
5.4.11.1	Exceptions to separation between external circuits and earth		N/A
5.4.11.2	Requirements		N/A
	Rated operating voltage U_{op} (V).....:		—
	Nominal voltage U_{peak} (V).....:		—
	Max increase due to variation U_{sp} .....:		—
	Max increase due to ageing ΔU_{sa} .....:		—
	$U_{op}= U_{peak} + \Delta U_{sp} + \Delta U_{sa}$ .....:		—
5.5	Components as safeguards		P
5.5.1	General	Approved in internal power supply.	P
5.5.2	Capacitors and RC units		P
5.5.2.1	General requirement		P
5.5.2.2	Safeguards against capacitor discharge after disconnection of a connector.....:		P
5.5.3	Transformers	Approved in internal power supply.	P
5.5.4	Optocouplers	Approved in internal power supply.	P
5.5.5	Relays		N/A
5.5.6	Resistors		N/A
5.5.7	SPD's		N/A
5.5.7.1	Use of an SPD connected to reliable earthing		N/A
5.5.7.2	Use of an SPD between mains and protective earth		N/A
5.5.8	Insulation between the mains and external circuit consisting of a coaxial cable.....:		N/A
5.6	Protective conductor		P
5.6.2	Requirement for protective conductors		P
5.6.2.1	General requirements		P
5.6.2.2	Colour of insulation		P
5.6.3	Requirement for protective earthing conductors		P
	Protective earthing conductor size (mm^2) .....:	min. 0,75	—

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Clause	Requirement + Test	Result - Remark	Verdict
5.6.4	Requirement for protective bonding conductors		P
5.6.4.1	Protective bonding conductors		P
	Protective bonding conductor size (mm^2). .....:	min. 0,75, Min. 4mm	—
	Protective current rating (A) ..... :	16A, 20A	—
5.6.4.3	Current limiting and overcurrent protective devices		P
5.6.5	Terminals for protective conductors		P
5.6.5.1	Requirement		P
	Conductor size (mm^2), nominal thread diameter (mm). .....:	min. 0,75mm^2, Min. 4mm	P
5.6.5.2	Corrosion		P
5.6.6	Resistance of the protective system		P
5.6.6.1	Requirements		P
5.6.6.2	Test Method Resistance (Ω).....:	(See appended table 5.6.6.2)	P
5.6.7	Reliable earthing		P
5.7	Prospective touch voltage, touch current and protective conductor current		P
5.7.2	Measuring devices and networks		P
5.7.2.1	Measurement of touch current .....:	(See appended table 5.7.4)	P
5.7.2.2	Measurement of prospective touch voltage		P
5.7.3	Equipment set-up, supply connections and earth connections		P
	System of interconnected equipment (separate connections/single connection) .....:		—
	Multiple connections to mains (one connection at a time/simultaneous connections) .....:		—
5.7.4	Earthed conductive accessible parts.....:	(See appended Table 5.7.4)	P
5.7.5	Protective conductor current		N/A
	Supply Voltage (V).....:		—
	Measured current (mA).....:		—
	Instructional Safeguard.....:	(See F.4 and F.5)	N/A
5.7.6	Prospective touch voltage and touch current due to external circuits		N/A
5.7.6.1	Touch current from coaxial cables		N/A
5.7.6.2	Prospective touch voltage and touch current from external circuits		N/A
5.7.7	Summation of touch currents from external circuits		N/A
	a) Equipment with earthed external circuits Measured current (mA).....:		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
	b) Equipment whose external circuits are not referenced to earth. Measured current (mA) .....:		N/A

6	**ELECTRICALLY- CAUSED FIRE**		P
6.2	Classification of power sources (PS) and potential ignition sources (PIS)		P
6.2.2	Power source circuit classifications		P
6.2.2.1	General		P
6.2.2.2	Power measurement for worst-case load fault ... :	The internal circuit is considered as PS3 without test.	P
6.2.2.3	Power measurement for worst-case power source fault ..... :	The internal circuit is considered as PS3 without test.	P
6.2.2.4	PS1 ..... :	(See appended table 6.2.2)	P
6.2.2.5	PS2 ..... :		P
6.2.2.6	PS3 ..... :	The product is powered by PS3. And internal circuit is considered as PS3 without test.	P
6.2.3	Classification of potential ignition sources		P
6.2.3.1	Arcing PIS ..... :	Primary circuit as Arcing PIS without test.	P
6.2.3.2	Resistive PIS ..... :	The internal circuit except Primary circuit is considered as resistive PIS without test.	P
6.3	Safeguards against fire under normal operating and abnormal operating conditions		P
6.3.1 (a)	No ignition and attainable temperature value less than 90 % defined by ISO 871 or less than 300 °C for unknown materials ..... :	(See appended table 5.4.1.5, 6.3.2, 9.0, B.2.6)	P
6.3.1 (b)	Combustible materials outside fire enclosure	Plastic enclosure outside of metal enclosure: Min. HB	P
6.4	Safeguards against fire under single fault conditions		P
6.4.1	Safeguard Method		P
6.4.2	Reduction of the likelihood of ignition under single fault conditions in PS1 circuits		N/A
6.4.3	Reduction of the likelihood of ignition under single fault conditions in PS2 and PS3 circuits		N/A
6.4.3.1	General		N/A
6.4.3.2	Supplementary Safeguards		N/A
	Special conditions if conductors on printed boards are opened or peeled		N/A
6.4.3.3	Single Fault Conditions ..... :		N/A
	Special conditions for temperature limited by fuse		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
6.4.4	Control of fire spread in PS1 circuits		P
6.4.5	Control of fire spread in PS2 circuits		P
6.4.5.2	Supplementary safeguards .....:		P
6.4.6	Control of fire spread in PS3 circuit		P
6.4.7	Separation of combustible materials from a PIS		N/A
6.4.7.1	General.....:		N/A
6.4.7.2	Separation by distance		N/A
6.4.7.3	Separation by a fire barrier		N/A
6.4.8	Fire enclosures and fire barriers		P
6.4.8.1	Fire enclosure and fire barrier material properties		P
6.4.8.2.1	Requirements for a fire barrier		N/A
6.4.8.2.2	Requirements for a fire enclosure		P
6.4.8.3	Constructional requirements for a fire enclosure and a fire barrier		P
6.4.8.3.1	Fire enclosure and fire barrier openings		P
6.4.8.3.2	Fire barrier dimensions		N/A
6.4.8.3.3	Top Openings in Fire Enclosure: dimensions (mm) .....:	No opening	P
	Needle Flame test		N/A
6.4.8.3.4	Bottom Openings in Fire Enclosure, condition met a), b) and/or c) dimensions (mm) .....:	EUT will be fixed installations on a non-combustible surface.	P
	Flammability tests for the bottom of a fire enclosure .....:		N/A
6.4.8.3.5	Integrity of the fire enclosure, condition met: a), b) or c) .....:	No door or cover.	N/A
6.4.8.4	Separation of PIS from fire enclosure and fire barrier distance (mm) or flammability rating.....:	Fire enclosure is metal and V-0 plastic enclosure.	P
6.5	Internal and external wiring		P
6.5.1	Requirements	1) VW-1 wires used, Which considered to equivalent to IEC/TS 60695-11-21 2) Acceptance of components and component requirements from IEC 60065 and IEC 60950-1.	P
6.5.2	Cross-sectional area (mm^2) .....:		—
6.5.3	Requirements for interconnection to building wiring .....:	(See Annex Q.)	N/A
6.6	Safeguards against fire due to connection to additional equipment		P
	External port limited to PS2 or complies with Clause Q.1		P

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Clause	Requirement + Test	Result - Remark	Verdict
7	**INJURY CAUSED BY HAZARDOUS SUBSTANCES**		P
7.2	Reduction of exposure to hazardous substances		N/A
7.3	Ozone exposure		N/A
7.4	Use of personal safeguards (PPE)		N/A
	Personal safeguards and instructions ..... :		—
7.5	Use of instructional safeguards and instructions		N/A
	Instructional safeguard (ISO 7010) .....:		—
7.6	Batteries .....:		P
8	**MECHANICALLY-CAUSED INJURY**		P
8.1	General		P
8.2	Mechanical energy source classifications		P
8.3	Safeguards against mechanical energy sources		P
8.4	Safeguards against parts with sharp edges and corners	No sharp edges or corners, MS1	N/A
8.4.1	Safeguards		N/A
8.5	Safeguards against moving parts	he DC Fan is within the limits under normal and fault conditions. DC Fan EE80251B3: $K = 6 \times 10\text{-}7(0{,}067 \times 40^2 \times 2800^2) = 511{,}79$ $2800/15000 + 511{,}79/2400 = 0{,}186+0{,}213=0{,}399<1$; Alt. DC Fan MGA8012KB-O25: $K = 6 \times 10\text{-}7(0{,}068 \times 40^2 \times 2800^2) = 511{,}79$ $2800/15000 + 511{,}79/2400 = 0{,}186+0{,}213=0{,}399<1$; According to above calculation, moving fans blade are considered not likely to cause injury.	P
8.5.1	MS2 or MS3 part required to be accessible for the function of the equipment		N/A
8.5.2	Instructional Safeguard..... :		—
8.5.4	Special categories of equipment comprising moving parts		N/A
8.5.4.1	Large data storage equipment		N/A
8.5.4.2	Equipment having electromechanical device for destruction of media		N/A
8.5.4.2.1	Safeguards and Safety Interlocks .....:	(See Annex F.4 and Annex K)	N/A
8.5.4.2.2	Instructional safeguards against moving parts		N/A
	Instructional Safeguard.....:		—

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Clause	Requirement + Test	Result - Remark	Verdict
8.5.4.2.3	Disconnection from the supply		N/A
8.5.4.2.4	Probe type and force (N) .....:		N/A
8.5.5	High Pressure Lamps		N/A
8.5.5.1	Energy Source Classification		N/A
8.5.5.2	High Pressure Lamp Explosion Test.....:	(See appended table 8.5.5.2)	N/A
8.6	Stability	Fixed equipment	N/A
8.6.1	Product classification		N/A
	Instructional Safeguard.....:		—
8.6.2	Static stability		N/A
8.6.2.2	Static stability test		N/A
	Applied Force .....:		—
8.6.2.3	Downward Force Test		N/A
8.6.3	Relocation stability test		N/A
	Unit configuration during 10° tilt.....:		—
8.6.4	Glass slide test		N/A
8.6.5	Horizontal force test (Applied Force).....:		N/A
	Position of feet or movable parts.....:		—
8.7	Equipment mounted to wall or ceiling		N/A
8.7.1	Mounting Means (Length of screws (mm) and mounting surface) .....:		N/A
8.7.2	Direction and applied force.....:		N/A
8.8	Handles strength		N/A
8.8.1	Classification		N/A
8.8.2	Applied Force .....:		N/A
8.9	Wheels or casters attachment requirements		N/A
8.9.1	Classification		N/A
8.9.2	Applied force .....:		—
8.10	Carts, stands and similar carriers		N/A
8.10.1	General		N/A
8.10.2	Marking and instructions		N/A
	Instructional Safeguard.....:		—
8.10.3	Cart, stand or carrier loading test and compliance		N/A
	Applied force .....:		—
8.10.4	Cart, stand or carrier impact test		N/A
8.10.5	Mechanical stability		N/A
	Applied horizontal force (N).....:		—

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Clause	Requirement + Test	Result - Remark	Verdict
8.10.6	Thermoplastic temperature stability (°C).....:		N/A
8.11	Mounting means for rack mounted equipment		N/A
8.11.1	General		N/A
8.11.2	Product Classification		N/A
8.11.3	Mechanical strength test, variable *N* .....:		N/A
8.11.4	Mechanical strength test 250N, including end stops		N/A
8.12	Telescoping or rod antennas.....	(See Annex T)	N/A
	Button/Ball diameter (mm).....:		—
9	**THERMAL BURN INJURY**		P
9.2	Thermal energy source classifications		P
9.3	Safeguard against thermal energy sources		P
9.4	Requirements for safeguards		P
9.4.1	Equipment safeguard		P
9.4.2	Instructional safeguard .....:		N/A
10	**RADIATION**		P
10.2	Radiation energy source classification		P
10.2.1	General classification	RS1 for LEDs.	P
10.3	Protection against laser radiation	No such part.	N/A
	Laser radiation that exists in the equipment:		—
	Normal, abnormal, single-fault .....:		N/A
	Instructional safeguard .....:		—
	Tool.....:		—
10.4	Protection against visible, infrared, and UV radiation	RS1 for LEDs.	P
10.4.1	General		P
10.4.1.a)	RS3 for Ordinary and instructed persons .....:		N/A
10.4.1.b)	RS3 accessible to a skilled person.....:		N/A
	Personal safeguard (PPE) instructional safeguard.....:		—
10.4.1.c)	Equipment visible, IR, UV does not exceed RS1 .....:		N/A
10.4.1.d)	Normal, abnormal, single-fault conditions .....:		N/A
10.4.1.e)	Enclosure material employed as safeguard is opaque.....:		N/A
10.4.1.f)	UV attenuation.....:		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
10.4.1.g)	Materials resistant to degradation UV .....:		N/A
10.4.1.h)	Enclosure containment of optical radiation.....:		N/A
10.4.1.i)	Exempt Group under normal operating conditions .....:		N/A
10.4.2	Instructional safeguard .....:		N/A
10.5	Protection against x-radiation		N/A
10.5.1	X- radiation energy source that exists equipment:	(See appended table B.3 & B.4)	N/A
	Normal, abnormal, single fault conditions		N/A
	Equipment safeguards.....:		N/A
	Instructional safeguard for skilled person.....:		N/A
10.5.3	Most unfavourable supply voltage to give maximum radiation .....:		—
	Abnormal and single-fault condition ..... :	(See appended table B.3 & B.4)	N/A
	Maximum radiation (pA/kg) ..... :		N/A
10.6	Protection against acoustic energy sources		N/A
10.6.1	General		N/A
10.6.2	Classification		N/A
	Acoustic output, dB(A)..... :		N/A
	Output voltage, unweighted r.m.s..... :		N/A
10.6.4	Protection of persons		N/A
	Instructional safeguards ..... :		N/A
	Equipment safeguard prevent ordinary person to RS2..... :		—
	Means to actively inform user of increase sound pressure..... :		—
	Equipment safeguard prevent ordinary person to RS2.....:		—
10.6.5	Requirements for listening devices (headphones, earphones, etc.)		N/A
10.6.5.1	Corded passive listening devices with analog input		N/A
	Input voltage with 94 dB(A) L_{Aeq} acoustic pressure output..... :		—
10.6.5.2	Corded listening devices with digital input		N/A
	Maximum dB(A)..... :		—
10.6.5.3	Cordless listening device		N/A
	Maximum dB(A)..... :		—

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Clause	Requirement + Test	Result - Remark	Verdict
B	**NORMAL OPERATING CONDITION TESTS, ABNORMAL OPERATING CONDITION TESTS AND SINGLE FAULT CONDITION TESTS**		P
B.2	Normal Operating Conditions		P
B.2.1	General requirements..... :	(See Test Item Particulars and appended test tables)	P
	Audio Amplifiers and equipment with audio amplifiers ..... :		N/A
B.2.3	Supply voltage and tolerances		P
B.2.5	Input test..... :	(See appended table B.2.5)	P
B.3	Simulated abnormal operating conditions		N/A
B.3.1	General requirements..... :		N/A
B.3.2	Covering of ventilation openings		N/A
B.3.3	D.C. mains polarity test		N/A
B.3.4	Setting of voltage selector ..... :		N/A
B.3.5	Maximum load at output terminals .....:		N/A
B.3.6	Reverse battery polarity		N/A
B.3.7	Abnormal operating conditions as specified in Clause E.2.		N/A
B.3.8	Safeguards functional during and after abnormal operating conditions		N/A
B.4	Simulated single fault conditions		P
B.4.2	Temperature controlling device open or short-circuited ..... :		N/A
B.4.3	Motor tests		P
B.4.3.1	Motor blocked or rotor locked increasing the internal ambient temperature ..... :	DC Fan	P
B.4.4	Short circuit of functional insulation		N/A
B.4.4.1	Short circuit of clearances for functional insulation		N/A
B.4.4.2	Short circuit of creepage distances for functional insulation		N/A
B.4.4.3	Short circuit of functional insulation on coated printed boards		N/A
B.4.5	Short circuit and interruption of electrodes in tubes and semiconductors		N/A
B.4.6	Short circuit or disconnect of passive components		P
B.4.7	Continuous operation of components		N/A
B.4.8	Class 1 and Class 2 energy sources within limits during and after single fault conditions		P
B.4.9	Battery charging under single fault conditions ... :	See Annex M	P

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Clause	Requirement + Test	Result - Remark	Verdict
C	**UV RADIATION**		N/A
C.1	Protection of materials in equipment from UV radiation		N/A
C.1.2	Requirements		N/A
C.1.3	Test method		N/A
C.2	UV light conditioning test		N/A
C.2.1	Test apparatus		N/A
C.2.2	Mounting of test samples		N/A
C.2.3	Carbon-arc light-exposure apparatus		N/A
C.2.4	Xenon-arc light exposure apparatus		N/A
D	**TEST GENERATORS**		N/A
D.1	Impulse test generators		N/A
D.2	Antenna interface test generator		N/A
D.3	Electronic pulse generator		N/A
E	**TEST CONDITIONS FOR EQUIPMENT CONTAINING AUDIO AMPLIFIERS**		N/A
E.1	Audio amplifier normal operating conditions		N/A
	Audio signal voltage (V) .....:		—
	Rated load impedance (Ω) .....:		N/A
E.2	Audio amplifier abnormal operating conditions		N/A
F	**EQUIPMENT MARKINGS, INSTRUCTIONS, AND INSTRUCTIONAL SAFEGUARDS**		P
F.1	General requirements		P
	Instructions – Language .....:	With all target countries local language	—
F.2	Letter symbols and graphical symbols		P
F.2.1	Letter symbols according to IEC60027-1		P
F.2.2	Graphic symbols IEC, ISO or manufacturer specific		P
F.3	Equipment markings		P
F.3.1	Equipment marking locations		P
F.3.2	Equipment identification markings		P
F.3.2.1	Manufacturer identification .....:	See copy of marking plate	—
F.3.2.2	Model identification .....:	See copy of marking plate	—
F.3.3	Equipment rating markings		P
F.3.3.1	Equipment with direct connection to mains		P
F.3.3.2	Equipment without direct connection to mains		N/A
F.3.3.3	Nature of supply voltage .....:	See copy of marking plate	—
F.3.3.4	Rated voltage .....:	See copy of marking plate	—
F.3.3.5	Rated frequency .....:	See copy of marking plate	—

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Clause	Requirement + Test	Result - Remark	Verdict
F.3.3.6	Rated current or rated power .....:	See copy of marking plate	—
F.3.3.7	Equipment with multiple supply connections		N/A
F.3.4	Voltage setting device		N/A
F.3.5	Terminals and operating devices		P
F.3.5.1	Mains appliance outlet and socket-outlet markings..... :		N/A
F.3.5.2	Switch position identification marking ..... :	I/O	P
F.3.5.3	Replacement fuse identification and rating markings..... :	Approved in internal power supply.	P
F.3.5.4	Replacement battery identification marking ..... :		N/A
F.3.5.5	Terminal marking location		P
F.3.6	Equipment markings related to equipment classification		P
F.3.6.1	Class I Equipment		P
F.3.6.1.1	Protective earthing conductor terminal		P
F.3.6.1.2	Neutral conductor terminal		N/A
F.3.6.1.3	Protective bonding conductor terminals		P
F.3.6.2	Class II equipment (IEC60417-5172)		N/A
F.3.6.2.1	Class II equipment with or without functional earth		N/A
F.3.6.2.2	Class II equipment with functional earth terminal marking		N/A
F.3.7	Equipment IP rating marking .....:		—
F.3.8	External power supply output marking		N/A
F.3.9	Durability, legibility and permanence of marking		P
F.3.10	Test for permanence of markings		P
F.4	Instructions		P
	a) Equipment for use in locations where children not likely to be present - marking		P
	b) Instructions given for installation or initial use		P
	c) Equipment intended to be fastened in place		N/A
	d) Equipment intended for use only in restricted access area		N/A
	e) Audio equipment terminals classified as ES3 and other equipment with terminals marked in accordance F.3.6.1		N/A
	f) Protective earthing employed as safeguard		P
	g) Protective earthing conductor current exceeding ES 2 limits		N/A
	h) Symbols used on equipment		P

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Clause	Requirement + Test	Result - Remark	Verdict
	i) Permanently connected equipment not provided with all-pole mains switch		P
	j) Replaceable components or modules providing safeguard function		N/A
F.5	Instructional safeguards		P
	Where “instructional safeguard” is referenced in the test report it specifies the required elements, location of marking and/or instruction		P
G	**COMPONENTS**		P
G.1	**Switches**		P
G.1.1	General requirements		P
G.1.2	Ratings, endurance, spacing, maximum load		N/A
G.2	**Relays**		N/A
G.2.1	General requirements		N/A
G.2.2	Overload test		N/A
G.2.3	Relay controlling connectors supply power		N/A
G.2.4	Mains relay, modified as stated in G.2		N/A
G.3	**Protection Devices**		P
G.3.1	Thermal cut-offs		N/A
G.3.1.1a) &b)	Thermal cut-outs separately approved according to IEC 60730 with conditions indicated in a) & b)		N/A
G.3.1.1c)	Thermal cut-outs tested as part of the equipment as indicated in c)		N/A
G.3.1.2	Thermal cut-off connections maintained and secure		N/A
G.3.2	Thermal links		N/A
G.3.2.1a)	Thermal links separately tested with IEC 60691		N/A
G.3.2.1b)	Thermal links tested as part of the equipment		N/A
	Aging hours (H) ..... :		—
	Single Fault Condition ..... :		—
	Test Voltage (V) and Insulation Resistance (Ω). :		—
G.3.3	PTC Thermistors		P
G.3.4	Overcurrent protection devices	Approved in internal power supply.	P
G.3.5	Safeguards components not mentioned in G.3.1 to G.3.5		N/A
G.3.5.1	Non-resettable devices suitably rated and marking provided		N/A
G.3.5.2	Single faults conditions.....:	(See appended Table B.4)	N/A
G.4	**Connectors**		P
G.4.1	Spacings		P

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Clause	Requirement + Test	Result - Remark	Verdict
G.4.2	Mains connector configuration .....:		P
G.4.3	Plug is shaped that insertion into mains socket-outlets or appliance coupler is unlikely		N/A
G.5	**Wound Components**		P
G.5.1	Wire insulation in wound components.....	Approved in internal power supply.	P
G.5.1.2 a)	Two wires in contact inside wound component, angle between 45° and 90°		N/A
G.5.1.2 b)	Construction subject to routine testing		N/A
G.5.2	Endurance test on wound components		N/A
G.5.2.1	General test requirements		N/A
G.5.2.2	Heat run test		N/A
	Time (s) .....:		—
	Temperature (°C) .....:		—
G.5.2.3	Wound Components supplied by mains		N/A
G.5.3	**Transformers**		P
G.5.3.1	Requirements applied (IEC61204-7, IEC61558-1/-2, and/or IEC62368-1) .....:	Approved in internal power supply.	P
	Position.....:		—
	Method of protection .....:		—
G.5.3.2	Insulation		N/A
	Protection from displacement of windings .....:		—
G.5.3.3	Overload test..... :		N/A
G.5.3.3.1	Test conditions		N/A
G.5.3.3.2	Winding Temperatures testing in the unit		N/A
G.5.3.3.3	Winding Temperatures - Alternative test method		N/A
G.5.4	**Motors**		P
G.5.4.1	General requirements		N/A
	Position .....:		—
G.5.4.2	Test conditions		N/A
G.5.4.3	Running overload test		N/A
G.5.4.4	Locked-rotor overload test		N/A
	Test duration (days) .....:		—
G.5.4.5	Running overload test for d.c. motors in secondary circuits		N/A
G.5.4.5.2	Tested in the unit		N/A
	Electric strength test (V).....:		—
G.5.4.5.3	Tested on the Bench - Alternative test method; test time (h) .....:		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
	Electric strength test (V) ..... :		—
G.5.4.6	Locked-rotor overload test for d.c. motors in secondary circuits	DC Fan	P
G.5.4.6.2	Tested in the unit		P
	Maximum Temperature ..... :		P
	Electric strength test (V) ..... :		N/A
G.5.4.6.3	Tested on the bench - Alternative test method; test time (h) ..... :		N/A
	Electric strength test (V) ..... :		N/A
G.5.4.7	Motors with capacitors		N/A
G.5.4.8	Three-phase motors		N/A
G.5.4.9	Series motors		N/A
	Operating voltage ..... :		—
G.6	**Wire Insulation**		P
G.6.1	General		P
G.6.2	Solvent-based enamel wiring insulation		N/A
G.7	**Mains supply cords**		N/A
G.7.1	General requirements		N/A
	Type..... :		—
	Rated current (A)..... :		—
	Cross-sectional area (mm^2), (AWG) ..... :		—
G.7.2	Compliance and test method		N/A
G.7.3	Cord anchorages and strain relief for non-detachable power supply cords		N/A
G.7.3.2	Cord strain relief		N/A
G.7.3.2.1	Requirements		N/A
	Strain relief test force (N) ..... :		—
G.7.3.2.2	Strain relief mechanism failure		N/A
G.7.3.2.3	Cord sheath or jacket position, distance (mm).... :		—
G.7.3.2.4	Strain relief comprised of polymeric material		N/A
G.7.4	Cord Entry ..... :		N/A
G.7.5	Non-detachable cord bend protection		N/A
G.7.5.1	Requirements		N/A
G.7.5.2	Mass (g) ..... :		—
	Diameter (m) ..... :		—
	Temperature (°C) ..... :		—
G.7.6	Supply wiring space		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
G.7.6.2	Stranded wire		N/A
G.7.6.2.1	Test with 8 mm strand		N/A
G.8	**Varistors**		P
G.8.1	General requirements	Approved internal power supply.	P
G.8.2	Safeguard against shock		N/A
G.8.3	Safeguard against fire		N/A
G.8.3.2	Varistor overload test .....:		N/A
G.8.3.3	Temporary overvoltage .....:		N/A
G.9	**Integrated Circuit (IC) Current Limiters**		P
G.9.1 a)	Manufacturer defines limit at max. 5A.		P
G.9.1 b)	Limiters do not have manual operator or reset		P
G.9.1 c)	Supply source does not exceed 250 VA .....:	See table 4.1.2	—
G.9.1 d)	IC limiter output current (max. 5A) .....:	See table 4.1.2	—
G.9.1 e)	Manufacturers' defined drift .....:		—
G.9.2	Test Program 1		N/A
G.9.3	Test Program 2		N/A
G.9.4	Test Program 3		N/A
G.10	**Resistors**		N/A
G.10.1	General requirements		N/A
G.10.2	Resistor test		N/A
G.10.3	Test for resistors serving as safeguards between the mains and an external circuit consisting of a coaxial cable		N/A
G.10.3.1	General requirements		N/A
G.10.3.2	Voltage surge test		N/A
G.10.3.3	Impulse test		N/A
G.11	**Capacitor and RC units**		P
G.11.1	General requirements	Approved internal power supply.	P
G.11.2	Conditioning of capacitors and RC units		N/A
G.11.3	Rules for selecting capacitors		N/A
G.12	**Optocouplers**		P
	Optocouplers comply with IEC 60747-5-5:2007 Spacing or Electric Strength Test (specify option and test results).....:	Approved internal power supply.	P
	Type test voltage Vini .....:	Min. 4000V	—
	Routine test voltage, Vini,b .....:	Min. 4000V	—
G.13	**Printed boards**		P
G.13.1	General requirements		P

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Clause	Requirement + Test	Result - Remark	Verdict
G.13.2	Uncoated printed boards		P
G.13.3	Coated printed boards		N/A
G.13.4	Insulation between conductors on the same inner surface		N/A
	Compliance with cemented joint requirements (Specify construction).....:		—
G.13.5	Insulation between conductors on different surfaces		N/A
	Distance through insulation.....:		N/A
	Number of insulation layers (pcs) .....:		—
G.13.6	Tests on coated printed boards		N/A
G.13.6.1	Sample preparation and preliminary inspection		N/A
G.13.6.2a)	Thermal conditioning		N/A
G.13.6.2b)	Electric strength test		N/A
G.13.6.2c)	Abrasion resistance test		N/A
G.14	**Coating on components terminals**		N/A
G.14.1	Requirements .....:		N/A
G.15	**Liquid filled components**		N/A
G.15.1	General requirements		N/A
G.15.2	Requirements		N/A
G.15.3	Compliance and test methods		N/A
G.15.3.1	Hydrostatic pressure test		N/A
G.15.3.2	Creep resistance test		N/A
G.15.3.3	Tubing and fittings compatibility test		N/A
G.15.3.4	Vibration test		N/A
G.15.3.5	Thermal cycling test		N/A
G.15.3.6	Force test		N/A
G.15.4	Compliance		N/A
G.16	**IC including capacitor discharge function (ICX)**		N/A
a)	Humidity treatment in accordance with sc 5.4.8 – 120 hours		N/A
b)	Impulse test using circuit 2 with Uc = to transient voltage .....:		N/A
C1)	Application of ac voltage at 110% of rated voltage for 2.5 minutes		N/A
C2)	Test voltage .....:		—
D1)	10,000 cycles on and off using capacitor with smallest capacitance resistor with largest resistance specified by manufacturer		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
D2)	Capacitance .....:		—
D3)	Resistance .....:		—
H	**CRITERIA FOR TELEPHONE RINGING SIGNALS**		N/A
H.1	General		N/A
H.2	Method A		N/A
H.3	Method B		N/A
H.3.1	Ringing signal		N/A
H.3.1.1	Frequency (Hz) .....:		—
H.3.1.2	Voltage (V) .....:		—
H.3.1.3	Cadence; time (s) and voltage (V) .....:		—
H.3.1.4	Single fault current (mA): .....:		—
H.3.2	Tripping device and monitoring voltage .....:		N/A
H.3.2.1	Conditions for use of a tripping device or a monitoring voltage complied with		N/A
H.3.2.2	Tripping device		N/A
H.3.2.3	Monitoring voltage (V) .....:		—
J	**INSULATED WINDING WIRES FOR USE WITHOUT INTERLEAVED INSULATION**		N/A
	General requirements	(See separate test report)	N/A
K	**SAFETY INTERLOCKS**		N/A
K.1	General requirements		N/A
K.2	Components of safety interlock safeguard mechanism	(See Annex G)	N/A
K.3	Inadvertent change of operating mode		N/A
K.4	Interlock safeguard override		N/A
K.5	Fail-safe		N/A
	Compliance .....:		N/A
K.6	Mechanically operated safety interlocks		N/A
K.6.1	Endurance requirement		N/A
K.6.2	Compliance and Test method .....:		N/A
K.7	Interlock circuit isolation		N/A
K.7.1	Separation distance for contact gaps & interlock circuit elements (type and circuit location) .....:		N/A
K.7.2	Overload test, Current (A) .....:		N/A
K.7.3	Endurance test		N/A
K.7.4	Electric strength test .....:		N/A
L	**DISCONNECT DEVICES**		P
L.1	General requirements		P

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Clause	Requirement + Test	Result - Remark	Verdict
L.2	Permanently connected equipment	Installation instructions stating that an appropriate disconnect device shall be provided as part of the building installation.	P
L.3	Parts that remain energized		P
L.4	Single phase equipment		P
L.5	Three-phase equipment		N/A
L.6	Switches as disconnect devices		N/A
L.7	Plugs as disconnect devices		N/A
L.8	Multiple power sources		N/A
M	**EQUIPMENT CONTAINING BATTERIES AND THEIR PROTECTION CIRCUITS**		P
M.1	General requirements		P
M.2	Safety of batteries and their cells		P
M.2.1	Requirements		P
M.2.2	Compliance and test method (identify method) .. :	See table 4.1.2	P
M.3	Protection circuits		P
M.3.1	Requirements		P
M.3.2	Tests		P
	- Overcharging of a rechargeable battery		P
	- Unintentional charging of a non-rechargeable battery		N/A
	- Reverse charging of a rechargeable battery		N/A
	- Excessive discharging rate for any battery		P
M.3.3	Compliance .....:		P
M.4	Additional safeguards for equipment containing secondary lithium battery	The average resistance of the lithium coin battery is larger than 3Ω according to IEC 62133-2 Annex D.	N/A
M.4.1	General		N/A
M.4.2	Charging safeguards		N/A
M.4.2.1	Charging operating limits		N/A
M.4.2.2a)	Charging voltage, current and temperature .....:		—
M.4.2.2 b)	Single faults in charging circuitry .....:		—
M.4.3	Fire Enclosure		N/A
M.4.4	Endurance of equipment containing a secondary lithium battery		N/A
M.4.4.2	Preparation		N/A
M.4.4.3	Drop and charge/discharge function tests		N/A
	Drop		N/A
	Charge		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
	Discharge		N/A
M.4.4.4	Charge-discharge cycle test		N/A
M.4.4.5	Result of charge-discharge cycle test		N/A
M.5	Risk of burn due to short circuit during carrying		N/A
M.5.1	Requirement		N/A
M.5.2	Compliance and Test Method (Test of P.2.3)		N/A
M.6	Prevention of short circuits and protection from other effects of electric current		P
M.6.1	Short circuits		P
M.6.1.1	General requirements	Certified coin battery	P
M.6.1.2	Test method to simulate an internal fault		N/A
M.6.1.3	Compliance (Specify M.6.1.2 or alternative method) ..... :		N/A
M.6.2	Leakage current (mA) ..... :		N/A
M.7	Risk of explosion from lead acid and NiCd batteries		N/A
M.7.1	Ventilation preventing explosive gas concentration		N/A
M.7.2	Compliance and test method		N/A
M.8	Protection against internal ignition from external spark sources of lead acid batteries		N/A
M.8.1	General requirements		N/A
M.8.2	Test method		N/A
M.8.2.1	General requirements		N/A
M.8.2.2	Estimation of hypothetical volume *Vz* (m^3/s)..... :		—
M.8.2.3	Correction factors..... :		—
M.8.2.4	Calculation of distance *d* (mm) ..... :		—
M.9	Preventing electrolyte spillage		N/A
M.9.1	Protection from electrolyte spillage		N/A
M.9.2	Tray for preventing electrolyte spillage		N/A
M.10	Instructions to prevent reasonably foreseeable misuse (Determination of compliance: inspection, data review; or abnormal testing) ..... :		P
N	**ELECTROCHEMICAL POTENTIALS**		P
	Metal(s) used ..... :	Pollution degree considered	—
O	**MEASUREMENT OF CREEPAGE DISTANCES AND CLEARANCES**		P
	Figures O.1 to O.20 of this Annex applied..... :	Refer to the certified power supply.	—

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Clause	Requirement + Test	Result - Remark	Verdict
P	**SAFEGUARDS AGAINST ENTRY OF FOREIGN OBJECTS AND SPILLAGE OF INTERNAL LIQUIDS**		P
P.1	General requirements		P
P.2.2	Safeguards against entry of foreign object		P
	Location and Dimensions (mm) .....:	No openings within the 5 degree projection of internal components requiring a fire enclosure. EUT will fixed installations on a non-combustible surface.	—
P.2.3	Safeguard against the consequences of entry of foreign object		N/A
P.2.3.1	Safeguards against the entry of a foreign object		N/A
	Openings in transportable equipment		N/A
	Transportable equipment with metalized plastic parts .....:		N/A
P.2.3.2	Openings in transportable equipment in relation to metallized parts of a barrier or enclosure (identification of supplementary safeguard) .....:		N/A
P.3	Safeguards against spillage of internal liquids		N/A
P.3.1	General requirements		N/A
P.3.2	Determination of spillage consequences		N/A
P.3.3	Spillage safeguards		N/A
P.3.4	Safeguards effectiveness		N/A
P.4	Metallized coatings and adhesive securing parts		N/A
P.4.2 a)	Conditioning testing		N/A
	Tc (°C).....:		—
	Tr (°C) .....:		—
	Ta (°C).....:		—
P.4.2 b)	Abrasion testing .....:		N/A
P.4.2 c)	Mechanical strength testing .....:		N/A
Q	**CIRCUITS INTENDED FOR INTERCONNECTION WITH BUILDING WIRING**		P
Q.1	Limited power sources		P
Q.1.1 a)	Inherently limited output		N/A
Q.1.1 b)	Impedance limited output		N/A
	- Regulating network limited output under normal operating and simulated single fault condition		N/A
Q.1.1 c)	Overcurrent protective device limited output		P
Q.1.1 d)	IC current limiter complying with G.9		N/A
Q.1.2	Compliance and test method		P

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Clause	Requirement + Test	Result - Remark	Verdict
Q.2	Test for external circuits – paired conductor cable		N/A
	Maximum output current (A) .....:		—
	Current limiting method.....:		—
R	**LIMITED SHORT CIRCUIT TEST**		N/A
R.1	General requirements		N/A
R.2	Determination of the overcurrent protective device and circuit		N/A
R.3	Test method Supply voltage (V) and short-circuit current (A)). .....:		N/A
S	**TESTS FOR RESISTANCE TO HEAT AND FIRE**		N/A
S.1	Flammability test for fire enclosures and fire barrier materials of equipment where the steady state power does not exceed 4 000 W		N/A
	Samples, material .....:		—
	Wall thickness (mm).....:		—
	Conditioning (°C).....:		—
	Test flame according to IEC 60695-11-5 with conditions as set out		N/A
	- Material not consumed completely		N/A
	- Material extinguishes within 30s		N/A
	- No burning of layer or wrapping tissue		N/A
S.2	Flammability test for fire enclosure and fire barrier integrity		N/A
	Samples, material .....:		—
	Wall thickness (mm).....:		—
	Conditioning (°C).....:		—
	Test flame according to IEC 60695-11-5 with conditions as set out		N/A
	Test specimen does not show any additional hole		N/A
S.3	Flammability test for the bottom of a fire enclosure		N/A
	Samples, material .....:		—
	Wall thickness (mm).....:		—
	Cheesecloth did not ignite		N/A
S.4	Flammability classification of materials		N/A
S.5	Flammability test for fire enclosure materials of equipment with a steady-state power exceeding 4000 W		N/A
	Samples, material .....:		—
	Wall thickness (mm).....:		—

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Clause	Requirement + Test	Result - Remark	Verdict
	Conditioning (test condition), (°C) .....:		—
	Test flame according to IEC 60695-11-20 with conditions as set out		N/A
	After every test specimen was not consumed completely		N/A
	After fifth flame application, flame extinguished within 1 min		N/A
T	**MECHANICAL STRENGTH TESTS**		P
T.1	General requirements		P
T.2	Steady force test, 10 N .....:	(See appended table T.2)	P
T.3	Steady force test, 30 N .....:		N/A
T.4	Steady force test, 100 N .....:		N/A
T.5	Steady force test, 250 N .....:	(See appended table T.5)	P
T.6	Enclosure impact test	(See appended table T.6)	P
	Fall test		P
	Swing test		N/A
T.7	Drop test .....:		N/A
T.8	Stress relief test .....:	(See appended table T.8)	P
T.9	Impact Test (glass)		N/A
T.9.1	General requirements		N/A
T.9.2	Impact test and compliance		N/A
	Impact energy (J).....:		—
	Height (m) .....:		—
T.10	Glass fragmentation test .....:		N/A
T.11	Test for telescoping or rod antennas		N/A
	Torque value (Nm) .....:		—
U	**MECHANICAL STRENGTH OF CATHODE RAY TUBES (CRT) AND PROTECTION AGAINST THE EFECTS OF IMPLOSION**		N/A
U.1	General requirements		N/A
U.2	Compliance and test method for non-intrinsically protected CRTs		N/A
U.3	Protective Screen.....:	(See Annex T)	N/A
V	**DETERMINATION OF ACCESSIBLE PARTS (FINGERS, PROBES AND WEDGES)**		P
V.1	Accessible parts of equipment		P
V.2	Accessible part criterion		P

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Clause	Requirement + Test	Result - Remark	Verdict

4.1.2	TABLE: List of critical components				P
Object / part No.	**Manufacturer/ trademark**	**Type / model**	**Technical data**	**Standard**	**Mark(s) of conformity[1]**
Metal enclosure	Interchangeable	Interchangeable	Min.2,0 mm thickness	IEC 62368-1: 2014 EN 62368-1:2014+ A11:2017	Tested with appliance
Plastic enclosure (Card Cover)	Covestro Deutschland AG [PC Resins]	FR3010 + (z)	V-0, Min. thickness: 1,5 mm, 85°C	UL94	UL E41613
Plastic enclosure (Waterproof plastic parts for the top cover)	Covestro Deutschland AG [PC Resins]	FR3010 + (z)	V-0, Min. thickness: 3,0 mm, 85°C	UL94	UL E41613
FRONT/Black_ COVER (Outside fire Enclosure)	Covestro Deutschland AG [PC Resins]	2807+(z)(f1)	V-2, Min. thickness: 2,0 mm, 115°C	UL94	UL E41613
PCB	SHENZHEN MANKUN ELECTRONICS CO LTD	MK-D	V-0, 130°C	UL796 UL94	UL E248237
Alternative	GUANGZHOU FAST-PRINT CIRCUIT TECHNOLOGY CO LTD	M11	V-0, 130°C	UL796 UL94	UL E204460
Alternative	VICTORY GIANT TECHNOLOGY (HUIZHOU) CO LTD	SH13	V-0, 130°C	UL796 UL94	UL E248779
Alternative	SHENZHEN KINWONG ELECTRONIC CO LTD	5	V-0, 130°C	UL796 UL94	UL E243951
Alternative	SHENZHEN XUNJIEXING CIRCUIT TECH CO LTD	JX02	V-0, 130°C	UL796 UL94	UL E305654
Alternative	SHENZHEN KINWONG ELECTRONIC CO LTD	8B	V-0, 130°C	UL796 UL94	UL E243951
Alternative	WENZHOU OULONG ELECTRIC CO LTD	OL-D	V-0, 130°C	UL796 UL94	UL E231017

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Clause	Requirement + Test	Result - Remark	Verdict

Alternative	SHENZHEN XUNJIEXING CIRCUIT TECH CO LTD	JX01	V-0, 130°C	UL796 UL94	UL E305654
Alternative	SUNTAK MULTILAYER PCB CO LTD	STM-5	V-0, 130°C	UL796 UL94	UL E207844
Alternative	VICTORY GIANT TECHNOLOGY (HUIZHOU) CO LTD	SH	V-0, 130°C	UL796 UL94	UL E248779
Alternative	WENZHOU GALAXY ELECTRONICS CO LTD	01V0	V-0, 130°C	UL796 UL94	UL E157634
Alternative	SUZHOU CIRCUIT ELECTRONIC CO LTD	HLH-2	V-0, 130°C	UL796 UL94	UL E214229
Alternative	Interchangeable	Interchangeable	V-1 or better, 130°C	UL796 UL94	UL
Switching Power Supply	Channel Well Technology Co., Ltd.	KPL-060M-VI	Input: 100-240Vac 1,2A, 50/60Hz; output: 24V,2,5A 60W; Altitude: 5000m	IEC 62368-1:2014	TUVRheinlandRef. Certif. No.: US-TUVR-011359-A1; Report No.: 318581397 033
Alternative	Delta Electronics, Inc.	PMT-24V150W2BA	I/P: 1. 100-120V~/200-240V~, 50/60Hz, 3,0/1,7A; 2. 100-240V~, 50/60Hz, 3,0A, O/P: 12Vdc,12,5A,150W/15Vdc,10A,150W/24Vdc, 6,25A,150W/36Vdc,4,3A,154,8W/48Vdc, 3,3A,158,4W; Altitude: 5000m	IEC 62368-1:2014	TÜVRheinlandRef. Certif. No.: JPTUV-091300-M2; Report No.: 50174605 003

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Clause	Requirement + Test	Result - Remark	Verdict

Circuit-Breaker	DELIXI ELECTRIC LTD	CDB6HLES-63	Uimp:4kV; Ui:500V;Ue:AC230/240V(1P+N,2P), AC400/415V(3P,3P+N,4P); Generaltype: In: 1A,2A,3A,4A,5A,6A,10A,16A,20A,25A, 32A,40A,50A,63A;I△n:10mA(Only 1P+N,2P),30mA,50mA, 75mA,100mA,300mA, type A, type AC, electronic; Type S:In:32A,40A,50A,63A;IΔn:50mA,75mA,100mA,300mA,type A, type AC, electronic; Instantaneous tripping current: Type B, Type C, Type D; IΔm:630A;Ics:6kA;Icn:6kA; 1P+N(1 protected pole with an uninterrupted neutral pole), 2P(1 protected pole with a switched neutral pole), 3P,3P+N(3 protected pole with an uninterrupted neutral pole),4P; 1P+N,3P+N: No-Suitable for isolation; 2P,3P,4P Suitable for isolation;50/60Hz	IEC 61009-1:2010, IEC 61009-1:2010/AMD1:2012, IEC 61009-1:2010/AMD2:2013 used in conjunction with IEC 61009-2-2:1991 IEC 61009-1:2010,	CQC CB Cer No.: CN58487; Report No.: (2022)FQIIDQ-0894
Internal primary wire & Earth wire	SHENZHEN DONG TIAN TONG LI ELECTRICITY CO LTD	1015	Min.18AWG, 600V, 105°C, VW-1	UL758	UL E254854

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Clause	Requirement + Test	Result - Remark	Verdict

Alternative	SHENZHEN FUXINDA ELECTRONIC CO LTD	1015	Min.18AWG, 600V, 105°C, VW-1	UL758	UL E470257
Alternative	Kunshan Xinghongmeng Electronic Co Ltd	1015	Min.18AWG, 600V, 105°C, VW-1	UL758	UL E315421
Alternative	XINYA ELECTRONIC CO LTD	1015	Min.18AWG, 600V, 105°C, VW-1	UL758	UL E170689
Alternative	Interchangeable	Interchangeable	Min.18AWG, 600V, 105°C, VW-1	UL758	UL
Earthing Screw	Interchangeable	Interchangeable	Min diameter: 4mm	IEC 62368-1: 2014 EN 62368-1:2014+ A11:2017	Tested with appliance
RTC Battery	FDK CORPORATION	ML614R	Max Charging Current 300mA Max Charging Voltage 5,0V dc	UL1642	UL MH13421
Speaker	Shanghai Strength Electronics Co., Ltd	P77CP08-03+W1-R	8 Ω, 3 W	IEC 62368-1: 2014 EN 62368-1:2014+ A11:2017	Tested with appliance
PPTC (R105)	Polytronics Technology Corp.	SMD1812P260 TF/16	16V, Maximum non operating current: 2,6A; Minimum operating current: 5,2A	IEC 62319-1-1:2005 EN 62319-1-1:2005 IEC 62319-1:2005 EN 62319-1:2005	TÜVRheinland: R50099121
IC current limiter (UL2, UL1, UL11)	JOULWATT TECHNOLOGY CO LIMITED	JW7115S-1SOTA#TRPBF	Input: 2,7-5,5 V d.c.; Output: 2,7-5,5 V d.c.; Iout: 1,1-1,5 A	IEC 62368-1:2014	UL Ref. Certif. No.: DK-92033-UL
Alternative	SGMICRO	SGM2588AYN5G/TR, SGM2588BYN5G/TR, SGM2588GYN5G/TR	Input: 2,5-5,5 V d.c.; Output: 0-5,0 V d.c.; Maximum 1,1 A; Class III	IEC 62368-1:2018	SGS CB Certif. No.: BE-38642/M1
PTC (R145, R144, R1844, R1845, R147)	Polytronics Technology Corp.	SMD2920P185 TF	33V, Maximum non operating current: 1,85A; Minimum operating current: 3,7A	IEC 62319-1-1:2005 EN 62319-1-1:2005 IEC 62319-1:2005 EN 62319-1:2005	TÜVRheinland: R50099121

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Clause	Requirement + Test	Result - Remark	Verdict

Alternative	Polytronics Technology Corp.	SMDC185F/33-2	33V, Maximum non operating current: 1,85A; Minimum operating current: 3,7A	EN 60730-1:2016+A1:2019 IEC 60730-1:2013+A1+A2	TÜVRheinland: R72161779
Thermistors (PTC1)	Shenzhen JINRUI Electronic Material Co., Ltd	JK-mSMD125	1,25A,16V	EN 62319-1:2005 EN 62319-1-1:2005	TUV SUD: B170501068001
PTC (R11, R12)	Wayon Electronics Co., Ltd.	LP-NSM110	1,1A,6V	EN 62319-1-1:2005 EN 62319-1:2005	TÜVRheinland: R50318402
High-Side Power Switches with Flag (U13)	Richtek Technology Corp.	RT9742..G.	2,7-6V, 1A	IEC 62368-1:2014	Nemko: CB Ref. Certif. No.: NO109777
Polymeric Thermistors (R1824)	CYG Wayon Circuit Protection Co., Ltd	LP-NSM150	1,5A, 6V	EN 62319-1:2005 EN 62319-1-1:2005	TÜV Rheinland: R50318402
Polymeric Thermistors (R9, R10)	CYG WAYON CIRCUIT PROTECTION CO LTD	LP-SM125C	1,25A, 15V	EN 62319-1:2005 EN 62319-1-1:2005	TÜV Rheinland: R50318402
Power switch	LECI Electronics Co., Ltd	RS601 Serie(s), RS601D Serie(s)	AC 250 V, 13 A	DIN EN 61058-1-1 (VDE 0630-1-1):2017-02; EN 61058-1-1:2016 IEC 61058-1:2016 IEC 61058-1-1:2016 DIN EN IEC 61058-1 (VDE 0630-1):2018-08; EN IEC 61058-1:2018	VDE 40017430
DC Fan	Sunonwealth Electric Machine Industry Co., Ltd.	EE80251B3	12VDC,1,1W, 33CFM; 2800 RPM;	EN 62368-1:2014 EN IEC 62368-1:2020+A11	TUV RH: R 50007213
-Alt.	Dongguan Protechnic Electric Co., Ltd.	MGA8012KB-O25	12VDC,0,088A, 2800 RPM; 35,75CFM	EN 62368-1:2014/A11:2017	TUV SUD: B 031023 0137
Power connector	LINOYA ELECTRONIC TECHNOLOGY CO LTD	XYC-03	10A, 250V	DIN EN 60320-1 (VDE 0625-1):2016-04; EN 60320-1:2015 + AC:2016 IEC 60320-1:2015	VDE 40016051

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Clause	Requirement + Test	Result - Remark	Verdict

-Alt.	Interchangeable	Interchangeable	10A, 250V	DIN EN 60320-1 (VDE 0625-1):2016-04; EN 60320-1:2015 + AC:2016 IEC 60320-1:2015	VDE
Power cord	LINOYA ELECTRONIC TECHNOLOGY CO LTD	H05VV-F	3*0,75mm^2	DIN EN 50525-2-11 (VDE 0285-525-2-11):2012-01; EN 50525-2-11:2011	VDE 40035072
-Alt.	Interchangeable	Interchangeable	3*0,75mm^2	DIN EN 50525-2-11 (VDE 0285-525-2-11):2012-01; EN 50525-2-11:2011	VDE
Supplementary information: 1) Provided evidence ensures the agreed level of compliance. See OD-CB2039.					

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Clause	Requirement + Test	Result - Remark	Verdict

4.8.4, 4.8.5	**TABLE: Lithium coin/button cell batteries mechanical tests**	N/A

(The following mechanical tests are conducted in the sequence noted.)

4.8.4.2	**TABLE: Stress Relief test**		—
Part	Material	Oven Temperature (°C)	Comments
--	--	--	--

4.8.4.3	**TABLE: Battery replacement test**	—
Battery part no. ..... :	--	—

Battery Installation/withdrawal	Battery Installation/Removal Cycle	Comments
--	1	--
	2	--
	3	--
	4	--
	5	--
	6	--
	8	--
	9	--
	10	--

4.8.4.4	**TABLE: Drop test**		—
Impact Area	Drop Distance	Drop No	Observations
--	--	--	--
--	--	--	--
--	--	--	--

4.8.4.5	**TABLE: Impact**		—
Impacts per surface	Surface tested	Impact energy (Nm)	Comments
--	--	--	--

4.8.4.6	**TABLE: Crush test**		—
Test position	Surface tested	Crushing Force (N)	Duration force applied (s)
--	--	--	--

Supplementary information:

4.8.5	**TABLE: Lithium coin/button cell batteries mechanical test result**	N/A

Test position	Surface tested	Force (N)	Duration force applied (s)
--	--	--	--

IEC 62368-1			
Clause	Requirement + Test	Result - Remark	Verdict

Supplementary information:

5.2	Table: Classification of electrical energy sources							P
5.2.2.2 – Steady State Voltage and Current conditions								
No.	Supply Voltage	Location (e.g. circuit designation)	Test conditions	Parameters			ES Class	
				U (Vrms or Vpk)	I (Apk or Arms)	Hz		
1	100-120 V a.c./200-240 V a.c.	Power input	Normal	--	--	--	ES3*	
			Abnormal	--	--	--		
			Single fault	--	--	--		
5.2.2.3 - Capacitance Limits								
No.	Supply Voltage	Location (e.g. circuit designation)	Test conditions	Parameters			ES Class	
				Capacitance, nF	Upk (V)			
--	--	--	Normal	--	--		--	
			Abnormal	--	--			
			Single fault – SC/OC	--	--			
5.2.2.4 - Single Pulses								
No.	Supply Voltage	Location (e.g. circuit designation)	Test conditions	Parameters			ES Class	
				Duration (ms)	Upk (V)	Ipk (mA)		
--	--	--	Normal	--	--	--	--	
			Abnormal	--	--	--		
			Single fault – SC/OC	--	--	--		
5.2.2.5 - Repetitive Pulses								
No.	Supply Voltage	Location (e.g. circuit designation)	Test conditions	Parameters			ES Class	
				Off time (ms)	Upk (V)	Ipk (mA)		
--	--	--	Normal	--	--	--	--	
			Abnormal	--	--	--		
			Single fault – SC/OC	--	--	--		
Test Conditions: Normal – Abnormal - Supplementary information: SC=Short Circuit, OC=Short Circuit								
* The product is supplied by approved power source and which output is ES1, no voltage converter to higher voltage within the equipment except power source, all circuits except power source are considered ES1.								

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Clause	Requirement + Test	Result - Remark	Verdict

5.4.1.4, 6.3.2, 9.0, B.2.6	**TABLE: Temperature measurements**					P
	Supply voltage (V) ..... :	90VAC/ 60Hz	132VAC/ 50Hz	180VAC/ 60Hz	264VAC/ 50Hz	—
	Ambient T_{min} (°C) ..... :	23,9	23,7	23,8	22,4	—
	Ambient T_{max} (°C) ..... :	25,0	25,0	25,0	25,0	—
	Tma (°C) ..... :	45,0	45,0	45,0	45,0	—

Maximum measured temperature T of part/at:	T (°C)				Allowed T_{max} (°C)
For power supply (model: KPL-060M-VI) Model name: DS-K3G501BX-R					
PCB near U148(H0008 V1.1)	66,5	66,9	67,0	66,3	130
RTC(H0008 V1.1)	65,4	65,7	65,5	65,2	Ref.
PCB near U7(H1021 V1.0)	64,5	64,6	64,9	64,4	130
PCB near D3(H3029 V1.0)	73,6	72,8	72,3	73,2	130
Metal enclosure on top near light*	33,5	33,3	33,4	33,0	70
Plastic enclosure*	28,3	28,9	29,0	28,1	94
Plastic enclosure internal	50,5	51,1	50,9	50,2	85
AC Intel	60,2	60,4	59,9	57,0	70
C2 body	80,9	80,3	76,5	74,0	105
T1 coil	91,7	88,4	84,4	83,2	110
T1 core	88,2	87,2	82,2	80,2	110
C6 BODY	81,0	78,7	74,8	74,9	105
C7 body	80,7	78,4	76,0	76,2	105
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:							

Supplementary information:

Note 1: Tma should be considered as directed by appliable requirement

Note 2: Tma is not included in assessment of Touch Temperatures (Clause 9)

*: the measured temperature for this part is under ambient temperature of 25°C.

Other measured temperature point list in this table has calculated to Tma (45°C).

The limited value of power supply unit temperature refers to the power supply test report

IEC 62368-1			
Clause	Requirement + Test	Result - Remark	Verdict

5.4.1.4, 6.3.2, 9.0, B.2.6	**TABLE: Temperature measurements**					P
	Supply voltage (V) ..... :	90VAC/ 60Hz	132VAC/ 50Hz	180VAC/ 60Hz	264VAC/ 50Hz	—
	Ambient T_{min} (°C) ..... :	23,7	23,4	23,3	23,4	—
	Ambient T_{max} (°C) ..... :	25,0	25,0	25,0	25,0	—
	Tma (°C) ..... :	65,0	65,0	65,0	65,0	—
Maximum measured temperature T of part/at:		T (°C)				Allowed T_{max} (°C)
For power supply (model: PMT-24V150W2BA) Model name: DS-K3G501BX-R						
PCB near U148(H0008 V1.1)		85,9	86,3	86,4	86,0	130
RTC(H0008 V1.1)		84,8	85,2	85,3	84,9	Ref.
PCB near U7(H1021 V1.0)		84,0	84,3	84,4	84,0	130
PCB near D3(H3029 V1.0)		93,3	93,6	93,6	93,3	130
Metal enclosure on top near light*		33,1	33,4	33,5	33,2	70
Plastic enclosure*		27,9	28,1	28,3	27,8	94
Plastic enclosure internal		70,3	70,6	70,7	70,3	85
SW1		78,4	76,9	76,7	75,2	85
CX1 near FL1		79,5	77,6	77,4	76,0	105
FL1 coil		77,4	76,9	75,6	74,0	130
PCB under BD1		78,7	78,0	76,0	74,4	130
C4 near BD1		77,9	78,2	76,2	75,9	105
PCB under Q1		83,7	81,7	79,5	76,6	130
T1 coil (class F)		87,2	86,8	84,5	81,5	130
T1 core (class F)		78,8	78,9	76,6	73,8	130
IC51		73,5	73,3	71,3	70,9	110
C32 near T1		78,4	78,3	76,3	74,7	105
C103 near T1		83,6	83,1	80,9	79,3	105
Output terminal CN1 + pin		70,8	68,4	68,3	67,8	105
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
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IEC 62368-1			
Clause	Requirement + Test	Result - Remark	Verdict

Supplementary information:
Supplementary information: Note 1: Tma should be considered as directed by appliable requirement Note 2: Tma is not included in assessment of Touch Temperatures (Clause 9) *: the measured temperature for this part is under ambient temperature of 25 °C. Other measured temperature point list in this table has calculated to Tma (65°C). The limited value of power supply unit temperature refers to the power supply test report.

5.4.1.4, 6.3.2, 9.0, B.2.6	**TABLE: Temperature measurements**					P
	Supply voltage (V) ..... :	90VAC/ 60Hz	132VAC/ 50Hz	180VAC/ 60Hz	264VAC/ 50Hz	—
	Ambient T_{min} (°C) ..... :	23,6	24,3	24,1	24,4	—
	Ambient T_{max} (°C) ..... :	25,0	25,0	25,0	25,0	—
	Tma (°C) ..... :	45,0	45,0	45,0	45,0	—
Maximum measured temperature T of part/at:		T (°C)				Allowed T_{max} (°C)
For power supply (model: KPL-060M-VI) Model name: DS-K3G411BX-R						
PCB near U148(H0008 V1.1)		66,2	65,8	66,6	65,8	130
RTC(H0008 V1.1)		64,9	64,5	64,7	64,5	Ref.
PCB near U7(H1021 V1.0)		63,9	63,5	64,2	63,8	130
PCB near D3(H3029 V1.0)		72,8	71,8	71,7	71,5	130
Metal enclosure on top near light*		32,9	31,9	33,0	32,4	70
Plastic enclosure*		28,2	28,2	28,5	28,0	94
Plastic enclosure internal		50,3	50,2	50,1	49,8	85
AC Intel		59,0	59,3	59,2	58,7	70
C2 body		80,6	79,3	75,4	75,2	105
T1 coil		91,3	87,1	83,4	83,3	110
T1 core		88,0	86,0	81,3	80,9	110
C6 BODY		80,9	77,5	74,1	73,7	105
C7 body		80,3	77,4	75,0	74,8	105
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
--	--	--	--	--	--	--	--

IEC 62368-1			
Clause	Requirement + Test	Result - Remark	Verdict

Supplementary information:
Supplementary information: Note 1: Tma should be considered as directed by appliable requirement Note 2: Tma is not included in assessment of Touch Temperatures (Clause 9) *: the measured temperature for this part is under ambient temperature of 25°C. Other measured temperature point list in this table has calculated to Tma (45°C). The limited value of power supply unit temperature refers to the power supply test report

5.4.1.4, 6.3.2, 9.0, B.2.6	**TABLE: Temperature measurements**					P
	Supply voltage (V) ..... :	90VAC/ 60Hz	132VDC/ 50Hz	180VAC/ 60Hz	264VAC/ 50Hz	—
	Ambient T_{min} (°C) ..... :	23,7	23,7	23,4	24,6	—
	Ambient T_{max} (°C) ..... :	25,0	25,0	25,0	25,0	—
	Tma (°C) ..... :	65,0	65,0	65,0	65,0	—
Maximum measured temperature T of part/at:		T (°C)				Allowed T_{max} (°C)
For power supply (model: PMT-24V150W2BA) Model name: DS-K3G411BX-R						
PCB near U148(H0008 V1.1)		85,8	85,9	86,1	84,4	130
RTC(H0008 V1.1)		84,6	84,8	85,1	83,1	Ref.
PCB near U7(H1021 V1.0)		83,7	83,9	84,1	82,3	130
PCB near D3(H3029 V1.0)		93,1	93,1	93,1	91,7	130
Metal enclosure on top near light*		33,0	32,7	33,2	31,8	70
Plastic enclosure*		27,7	27,7	27,6	26,5	94
Plastic enclosure internal		70,1	70,1	70,5	68,8	85
SW1		78,0	76,3	76,4	73,5	85
CX1 near FL1		79,3	76,8	77,1	74,4	105
FL1 coil		76,8	76,2	75,2	72,6	130
PCB under BD1		78,3	77,1	75,5	72,8	130
C4 near BD1		77,4	77,5	75,9	74,5	105
PCB under Q1		82,9	81,0	78,9	75,3	130
T1 coil (class F)		87,1	86,3	84,0	80,0	130
T1 core (class F)		78,4	78,1	76,3	72,4	130
IC51		72,9	72,9	70,8	84,4	110

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Clause	Requirement + Test	Result - Remark	Verdict

C32 near T1	77,9	77,7	75,6	69,6	105
C103 near T1	83,0	82,3	80,4	73,4	105
Output terminal CN1 + pin	70,0	67,7	68,0	77,9	105

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:

Supplementary information:
Note 1: Tma should be considered as directed by appliable requirement
Note 2: Tma is not included in assessment of Touch Temperatures (Clause 9)
*: the measured temperature for this part is under ambient temperature of 25 °C.
Other measured temperature point list in this table has calculated to Tma (65°C).
The limited value of power supply unit temperature refers to the power supply test report.

5.4.1.10.2	TABLE: Vicat softening temperature of thermoplastics		N/A
Penetration (mm)..... :			—
Object/ Part No./Material	Manufacturer/trademark	T softening (°C)	
--	--	--	

Supplementary information:

5.4.1.10.3	TABLE: Ball pressure test of thermoplastics			P
Allowed impression diameter (mm) ..... :	≤ 2 mm			—
Object/Part No./Material	Manufacturer/trademark	Test temperature (°C)	Impression diameter (mm)	
AC Connector	See table 4.1.2	125	1,09	

Supplementary information:

5.4.2.2, 5.4.2.4 and 5.4.3	TABLE: Minimum Clearances/Creepage distance	P

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Clause	Requirement + Test	Result - Remark	Verdict

Clearance (cl) and creepage distance (cr) at/of/between:	Up (V)	U r.m.s. (V)	Frequency (kHz)[1]	Required cl (mm)	cl (mm) [2]	Required[3] cr (mm)	cr (mm)
For power supply (model: PMT-24V150W2BA)							
N pin on terminal CN1 to PE pin on terminal CN1	420	250	--	2,3	5,5	2,3	5,5
N pin to V- pin	420	250	--	4,5	8,0	4,5	8,0
Supplementary information:							
Note 1: Only for frequency above 30 kHz Note 2: See table 5.4.2.4 if this is based on electric strength test Note 3: Provide Material Group For power supply KPL-060M-VI which is fully wrapped without exposed primary circuit. All internal secondary wires are fixed in position by tape so that it is far away from primary circuit.Consider the altitude up to 5000m, multiplication factor (according to Table 17) is 1,48.							

5.4.2.3	TABLE: Minimum Clearances distances using required withstand voltage			P
	Overvoltage Category (OV):			II
	Pollution Degree:			2
Clearance distanced between:		Required withstand voltage	Required cl (mm)	Measured cl (mm)
See table 5.4.2.2, 5.4.2.4 and 5.4.3		2500Vpk	2,3 for BI 4,5 for RI	See table 5.4.2.2, 5.4.2.4 and 5.4.3
Supplementary information:				
BI: Basic insulation, Reinforced insulation. All internal secondary wires are fixed in position by tape so that it is far away from primary circuit.Consider the altitude up to 5000m, multiplication factor (according to Table 17) is 1,48.				

5.4.2.4	TABLE: Clearances based on electric strength test			N/A
Test voltage applied between:		Required cl (mm)	Test voltage (kV) peak/ r.m.s. / d.c.	Breakdown Yes / No
--		--	--	--
Supplementary information:				

5.4.4.2, 5.4.4.5 c) 5.4.4.9	TABLE: Distance through insulation measurements				N/A
Distance through insulation di at/of:	Peak voltage (V)	Frequency (kHz)	Material	Required DTI (mm)	DTI (mm)
--	--	--	--	--	--
Supplementary information:					

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Clause	Requirement + Test	Result - Remark	Verdict

5.4.9	TABLE: Electric strength tests			P
Test voltage applied between:		Voltage shape (AC, DC)	Test voltage (V)	Breakdown Yes / No
Functional:				
--		--	--	--
Basic/supplementary:				
L/N to protect earth		DC	2500	No
Reinforced:				
L/N to plastic enclosure		DC	4000	No
L/N to secondary circuits		DC	4000	No
Supplementary information:				
Two power supplies with the same test results.				

5.5.2.2	TABLE: Stored discharge on capacitors				P
Supply Voltage (V), Hz	Test Location	Operating Condition (N, S)	Switch position On or off	Measured Voltage (after 2 s)	ES Classification
--	--	--	--	--	--
Supplementary information:					
X-capacitors installed for testing are: [ ] bleeding resistor rating: [ ] ICX: Notes: A. Test Location: Phase to Neutral; Phase to Phase; Phase to Earth; and/or Neutral to Earth B. Operating condition abbreviations: N – Normal operating condition (e.g., normal operation, or open fuse); S –Single fault condition Considered in power supply.					

5.6.6.2	TABLE: Resistance of protective conductors and terminations				P
Accessible part		Test current (A)	Duration (min)	Voltage drop (V)	Resistance (Ω)
Earth pin to furthest end of metal enclosure		32	2	0,544	17mΩ
Earth pin to furthest end of metal enclosure		40	2	0,68	17mΩ
Supplementary information:					
For power supply (model: PMT-24V150W2BA)					

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Clause	Requirement + Test	Result - Remark	Verdict

5.7.2.2, 5.7.4	TABLE: Earthed accessible conductive part		P
Supply voltage .....:		264	—
Location		Test conditions specified in 6.1 of IEC 60990 or Fault Condition No in IEC 60990 clause 6.2.2.1 through 6.2.2.8, except for 6.2.2.7	Touch current (mA)
L/N to metal enclosure		1	For power supply (model: KPL-060M-VI): 0,143mA/0,145mA; For power supply (model: PMT-24V150W2BA) : 0,156mA/0,152mA
		2*	--
		3	--
		4	--
		5	--
		6	--
		8	--
Supplementary Information:			
Notes: [1] Supply voltage is the anticipated maximum Touch Voltage [2] Earthed neutral conductor [Voltage differences less than 1% or more] [3] Specify method used for measurement as described in IEC 60990 sub-clause 4.3 [4] IEC60990, sub-clause 6.2.2.7, Fault 7 not applicable. [5] (*) IEC60990, sub-clause 6.2.2.2 is not applicable if switch or disconnect device (e.g., appliance coupler) provided.			

6.2.2	Table: Electrical power sources (PS) measurements for classification				P
Source	Description	Measurement	Max Power after 3 s	Max Power after 5 s*)	PS Classification
Input and internal circuits	--	Power (W) :	--	--	PS3
		V_A (V) :	--	--	
		I_A (A) :	--	--	
Supplementary Information:					
(*) Measurement taken only when limits at 3 seconds exceed PS1 limits.					

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Clause	Requirement + Test	Result - Remark	Verdict

6.2.3.1	Table: Determination of Potential Ignition Sources (Arcing PIS)				P
Location		Open circuit voltage After 3 s (Vp)	Measured r.m.s current (Irms)	Calculated value (V_p x I_{rms})	Arcing PIS? Yes / No
All primary circuits		--	--	--	Yes
Supplementary information:					
Primary circuit as Arcing PIS without test. An Arcing PIS requires a minimum of 50 V (peak) a.c. or d.c. An Arcing PIS is established when the product of the open circuit voltage (V_p) and normal operating condition rms current (I_{rms}) is greater than 15.					

6.2.3.2	Table: Determination of Potential Ignition Sources (Resistive PIS)				P
Circuit Location (x-y)	Operating Condition (Normal / Describe Single Fault)	Measured wattage or VA During first 30 s (W / VA)	Measured wattage or VA After 30 s (W / VA)	Protective Circuit, Regulator, or PTC Operated? Yes / No (Comment)	Resistive PIS? Yes/No
All circuits except primary circuit	--	--	--	--	Yes
Supplementary Information:					
A combination of voltmeter, VA and ammeter IA may be used instead of a wattmeter. If a separate voltmeter and ammeter are used, the product of (VA x IA) is used to determine Resistive PIS classification. A Resistive PIS: (a) dissipates more than 15 W, measured after 30 s of normal operation, or (b) under single fault conditions has either a power exceeding 100 W measured immediately after the introduction of the fault if electronic circuits, regulators or PTC devices are used, or has an available power exceeding 15 W measured 30 s after introduction of the fault. The internal circuit except Primary circuit is considered as resistive PIS without test.					

8.5.5	TABLE: High Pressure Lamp		N/A
Description		Values	Energy Source Classification
Lamp type .....:			—
Manufacturer .....:			—
Cat no. .....:			—
Pressure (cold) (MPa).....:			MS_
Pressure (operating) (MPa).....:			MS_
Operating time (minutes).....:			—
Explosion method .....:			—
Max particle length escaping enclosure (mm) .:			MS_
Max particle length beyond 1 m (mm).....:			MS_
Overall result .....:			
Supplementary information:			

IEC 62368-1			
Clause	Requirement + Test	Result - Remark	Verdict

B.2.5	TABLE: Input test							P
U (V)	Hz	I (A)	I rated (A)	P (W)	P rated (W)	Fuse No	I fuse (A)	Condition/status
Model name: DS-K3G501BX-R								
For power supply (model: KPL-060M-VI):								
90	50	0,43	--	24,12	--	F1	0,43	Normal work.
90	60	0,43	--	23,94	--	F1	0,43	
100	50	0,40	1,0	24,07	--	F1	0,40	
100	60	0,39	1,0	23,45	--	F1	0,39	
120	50	0,35	1,0	24,41	--	F1	0,35	
120	60	0,35	1,0	24,05	--	F1	0,35	
132	50	0,33	--	24,42	--	F1	0,33	
132	60	0,33	--	24,54	--	F1	0,33	
180	50	0,25	--	24,32	--	F1	0,25	
180	60	0,26	--	24,82	--	F1	0,26	
200	50	0,24	1,5	24,48	--	F1	0,24	
200	60	0,24	1,5	25,10	--	F1	0,24	
240	50	0,26	1,5	25,23	--	F1	0,26	
240	60	0,25	1,5	25,01	--	F1	0,25	
264	50	0,21	--	25,21	--	F1	0,21	
264	60	0,22	--	25,41	--	F1	0,22	
For power supply (model: PMT-24V150W2BA)								
90	50	0,48	--	23,43	--	F1	0,48	Normal work.
90	60	0,47	--	23,65	--	F1	0,47	
100	50	0,43	1,0	23,37	--	F1	0,43	
100	60	0,43	1,0	23,80	--	F1	0,43	
120	50	0,37	1,0	23,37	--	F1	0,37	
120	60	0,37	1,0	23,74	--	F1	0,37	
132	50	0,35	--	23,46	--	F1	0,35	
132	60	0,35	--	23,84	--	F1	0,35	
180	50	0,28	--	23,34	--	F1	0,28	
180	60	0,28	--	23,84	--	F1	0,28	
200	50	0,26	1,5	23,51	--	F1	0,26	
200	60	0,26	1,5	23,64	--	F1	0,26	
240	50	0,23	1,5	23,74	--	F1	0,23	
240	60	0,23	1,5	23,84	--	F1	0,23	

IEC 62368-1								
Clause	Requirement + Test			Result - Remark				Verdict
264	50	0,22	--	23,92	--	F1	0,22	
264	60	0,22	--	24,04	--	F1	0,22	
Model name: DS-K3G411BX-R								
For power supply (model: KPL-060M-VI):								
90	50	0,48	--	23,41	--	F1	0,48	Normal work.
90	60	0,47	--	23,66	--	F1	0,47	
100	50	0,43	1,0	23,34	--	F1	0,43	
100	60	0,43	1,0	23,83	--	F1	0,43	
120	50	0,37	1,0	23,30	--	F1	0,37	
120	60	0,37	1,0	23,73	--	F1	0,37	
132	50	0,35	--	23,45	--	F1	0,35	
132	60	0,35	--	23,89	--	F1	0,35	
180	50	0,28	--	23,33	--	F1	0,28	
180	60	0,28	--	23,86	--	F1	0,28	
200	50	0,26	1,5	23,50	--	F1	0,26	
200	60	0,26	1,5	23,73	--	F1	0,26	
240	50	0,23	1,5	23,75	--	F1	0,23	
240	60	0,23	1,5	23,86	--	F1	0,23	
264	50	0,22	--	23,96	--	F1	0,22	
264	60	0,22	--	24,07	--	F1	0,22	
For power supply (model: PMT-24V150W2BA)								
90	50	0,43	--	24,05	--	F1	0,43	Normal work.
90	60	0,43	--	23,96	--	F1	0,43	
100	50	0,40	1,0	24,06	--	F1	0,40	
100	60	0,39	1,0	23,82	--	F1	0,39	
120	50	0,35	1,0	24,33	--	F1	0,35	
120	60	0,35	1,0	24,03	--	F1	0,35	
132	50	0,33	--	24,57	--	F1	0,33	
132	60	0,33	--	24,33	--	F1	0,33	
180	50	0,25	--	24,12	--	F1	0,25	
180	60	0,26	--	24,80	--	F1	0,26	
200	50	0,24	1,5	24,59	--	F1	0,24	
200	60	0,24	1,5	25,12	--	F1	0,24	
240	50	0,26	1,5	25,13	--	F1	0,26	
240	60	0,25	1,5	25,00	--	F1	0,25	
264	50	0,21	--	25,34	--	F1	0,21	
264	60	0,22	--	25,43	--	F1	0,22	

IEC 62368-1			
Clause	Requirement + Test	Result - Remark	Verdict

B.3	TABLE: Abnormal operating condition tests								N/A
Ambient temperature (°C) .....:						--			—
Power source for EUT: Manufacturer, model/type, output rating .:						--			—
Component No.	Abnormal Condition	Supply voltage, (V)	Test time	Fuse no.	Fuse current, (A)	T-couple	Temp. (°C)	Observation	
--	--	--	--	--	--	--	--	--	
Supplementary information:									
Test table is provided to record abnormal and fault conditions for all applicable energy sources including Thermal burn injury. Column “Abnormal/Fault.” Specify if test condition by indicating “Abnormal” then the condition for a Clause B.3 test or “Single Fault” then the condition for Clause B.4. Sc=Short circuit.									

B.4	TABLE: Fault condition tests							P
Ambient temperature (°C) .....:					25°C if not specified			—
Power source for EUT: Manufacturer, model/type, output rating ..:					See table 4.1.2			—
Component No.	Fault Condition	Supply voltage, (V)	Test time	Fuse no.	Fuse current, (A)	T-couple	Temp. (°C)	Observation
Model name: DS-K3G501BX-R								
For power supply (model: KPL-060M-VI):								
CV15	SC	264V	10min	F1	0,01	--	--	EUT shutdown immediately, No damage,no hazard.
LED	SC	264V	10min	F1	0,20	--	--	LED shutdown immediately, No damage,no hazard.
For power supply (model: PMT-24V150W2BA)								
CV15	SC	264V	10min	F1	0,01	--	--	EUT shutdown immediately, No damage,no hazard.
LED	SC	264V	10min	F1	0,20	--	--	LED shutdown immediately, No damage,no hazard.

IEC 62368-1								
Clause	Requirement + Test					Result - Remark		Verdict
Fan	Locked	90	3h	F1	0,43	K	PCB near D3(H3029 V1.0): 53,1°C T1 coil (class F): 46,5°C Metal enclosure: 22,8°C Ambient: 22,4°C	Normal work, no damage, no hazard.
Model name: DS-K3G411BX-R								
For power supply (model: KPL-060M-VI):								
CV15	SC	264V	10min	F1	0.01	--	--	EUT shutdown immediately, No damage,no hazard.
LED	SC	264V	10min	F1	0.20	--	--	LED shutdown immediately, No damage,no hazard.
For power supply (model: PMT-24V150W2BA)								
CV15	SC	264V	10min	F1	0,01	--	--	EUT shutdown immediately, No damage,no hazard.
LED	SC	264V	10min	F1	0,20	--	--	LED shutdown immediately, No damage,no hazard.
Fan	Locked	90	3h	F1	0,43	K	PCB near D3(H3029 V1.0): 52,9°C T1 coil (class F): 46,1°C Metal enclosure: 22,6°C Ambient: 22,4°C	Normal work, no damage, no hazard.
Supplementary information:								
Sc=Short circuit								

Annex M.3	**TABLE: Batteries**		P
The tests of Annex M are applicable only when appropriate battery data is not available			P
Is it possible to install the battery in a reverse polarity position?.....:		N/A	P
	Non-rechargeable batteries	Rechargeable batteries	

IEC 62368-1			
Clause	Requirement + Test	Result - Remark	Verdict

	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	--	--	--	3,2mA	300mA	0,001mA	--	--	--
Max. current during fault condition	--	--	--	6,4mA (RA167 Sc)	300mA	2,9mA (CA63 SC)	--	--	--

Test results:		Verdict
- Chemical leaks	No	P
- Explosion of the battery	No	P
- Emission of flame or expulsion of molten metal	No	P
- Electric strength tests of equipment after completion of tests	--	N/A
Supplementary information:		
Sc=Short circuit		

Annex M.4	**Table: Additional safeguards for equipment containing secondary lithium batteries**	N/A

Battery/Cell No.	Test conditions	Measurements			Observation
		U	I (A)	Temp (C)	
--	Normal	--	--	--	--
--	Abnormal	--	--	--	--
--	Single fault –SC/OC	--	--	--	--
Supplementary Information:					

Battery identification	Charging at T_{lowest} (°C)	Observation	Charging at $T_{highest}$ (°C)	Observation
--	--	--	--	--
--	--	--	--	--
--	--	--	--	--
Supplementary Information:				

IEC 62368-1			
Clause	Requirement + Test	Result - Remark	Verdict

Annex Q.1	TABLE: Circuits intended for interconnection with building wiring (LPS)						P
Note: Measured UOC (V) with all load circuits disconnected:							
Output Circuit	Components	U_{oc} (V)	I_{sc} (A)		S (VA)		
			Meas.	Limit	Meas.	Limit	
LAN port	Normal	0	0	8	0	100	
Supplementary Information:							

T.2, T.3, T.4, T.5	TABLE: Steady force test					P
Part/Location	Material	Thickness (mm)	Force (N)	Test Duration (sec)	Observation	
Enclosure	Metal	Min. 2,0	250	5	Intact	
Card Cover	Plastic	Min. 2,5	250	5	Intact	
Waterproof plastic parts for the top cover	Plastic	Min. 2,0	250	5	Intact	
Supplementary information:						

T.6, T.9	TABLE: Impact tests				P
Part/Location	Material	Thickness (mm)	Vertical distance (mm)	Observation	
Enclosure	Metal	Min. 2,0	1300	Intact	
Card Cover	Plastic	Min. 2,5	1300	Intact	
Waterproof plastic parts for the top cover	Plastic	Min. 2,0	1300	Intact	
Supplementary information:					

T.7	TABLE: Drop tests				N/A
Part/Location	Material	Thickness (mm)	Drop Height (mm)	Observation	
--	--	--	--	--	
Supplementary information:					

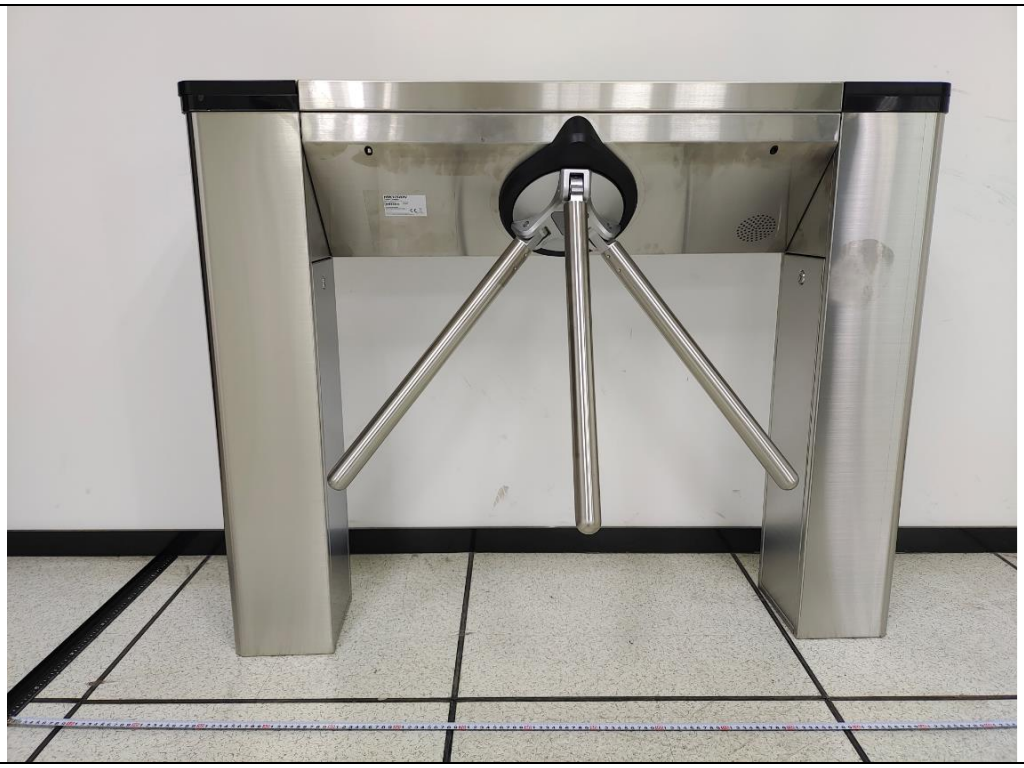
T.8	TABLE: Stress relief test	P

IEC 62368-1			
Clause	Requirement + Test	Result - Remark	Verdict

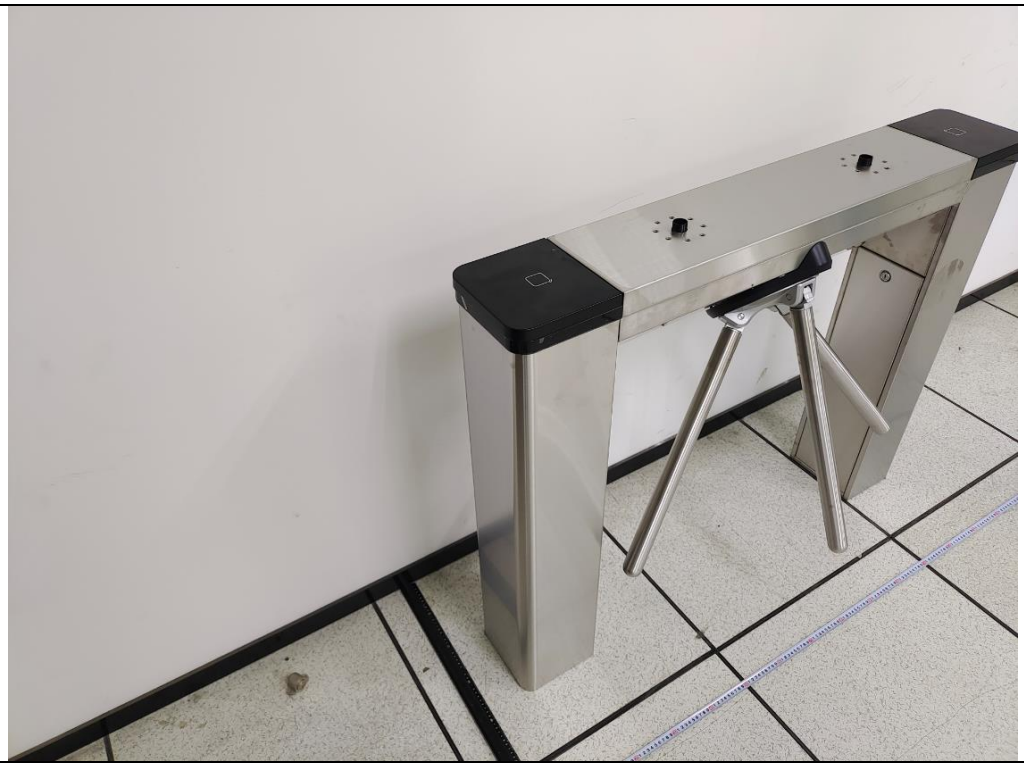
Part/Location	Material	Thickness (mm)	Oven Temperature (°C)	Duration (h)	Observation
Card Cover	Plastic	Min. 2,5	81	7	Intact
Waterproof plastic parts for the top cover	Plastic	Min. 2,0	81	7	Intact
Supplementary information:					

- - - End of Report - - -

Details of: General View model name: DS-K3G501BX-R

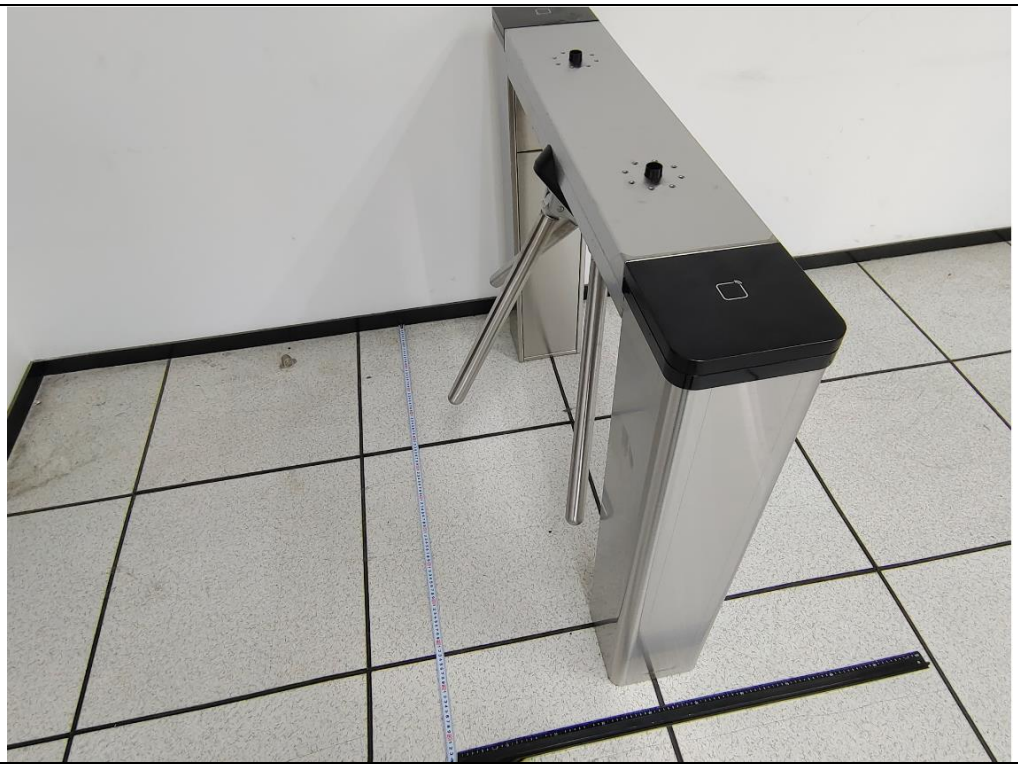


Details of: General View model name: DS-K3G501BX-R



Details of: General View model name: DS-K3G501BX-R

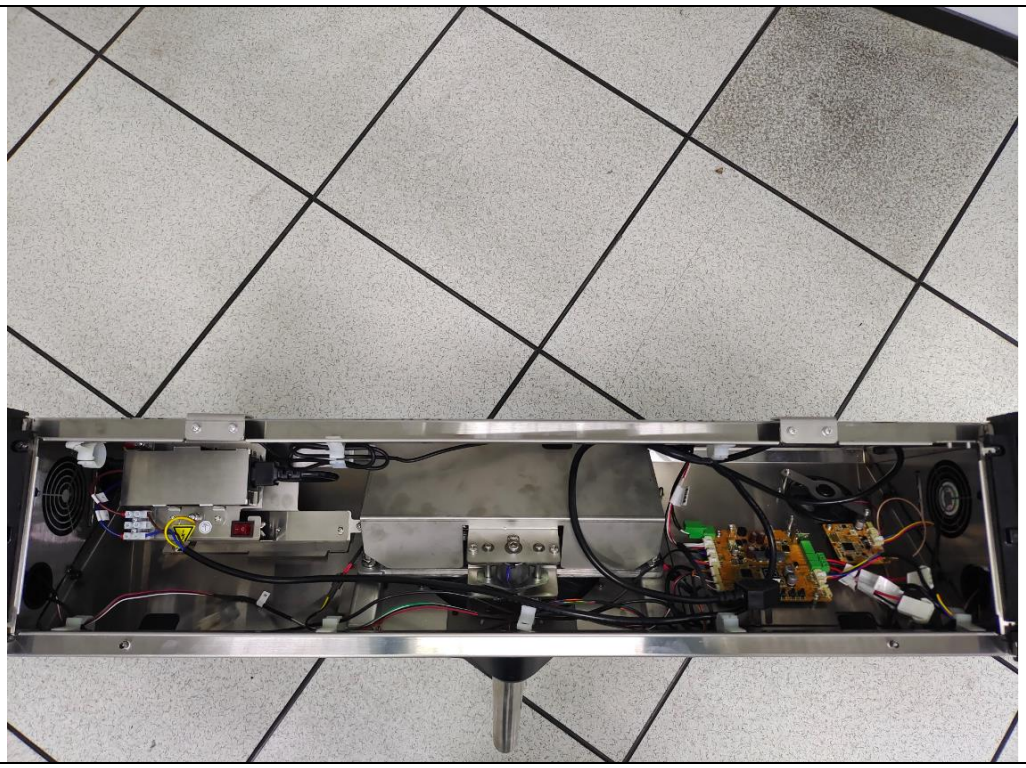
Details of: General View model name: DS-K3G501BX-R



Details of: General View model name: DS-K3G501BX-R

Details of: General View model name: DS-K3G501BX-R

Details of: Internal View model name: DS-K3G501BX-R



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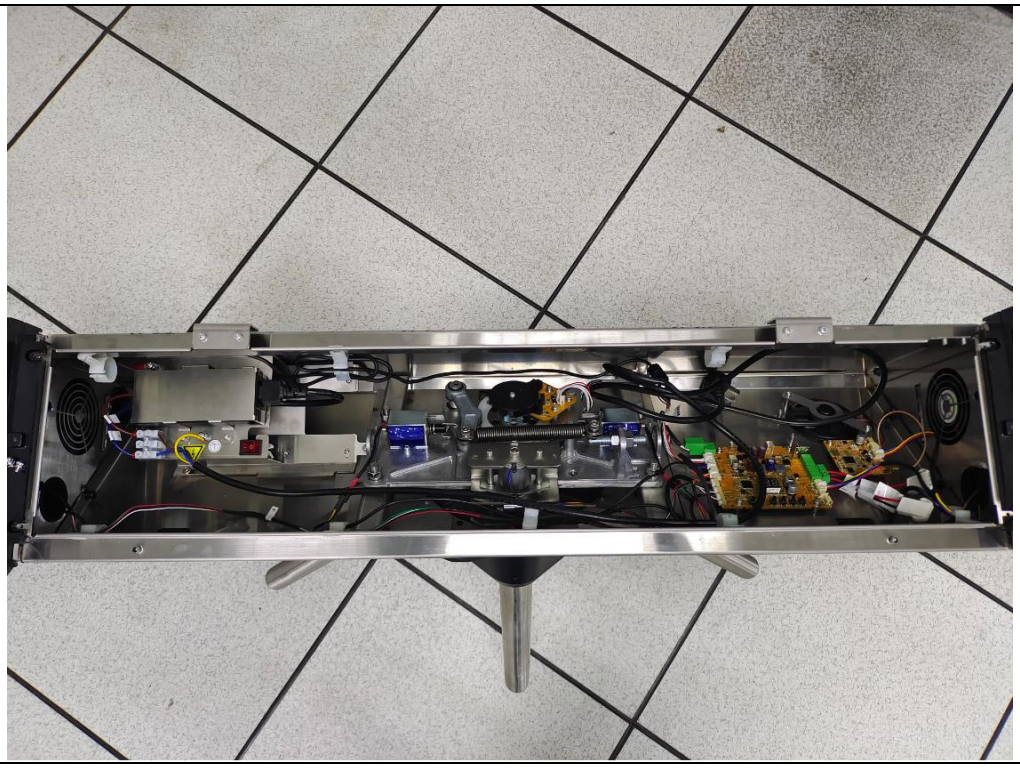

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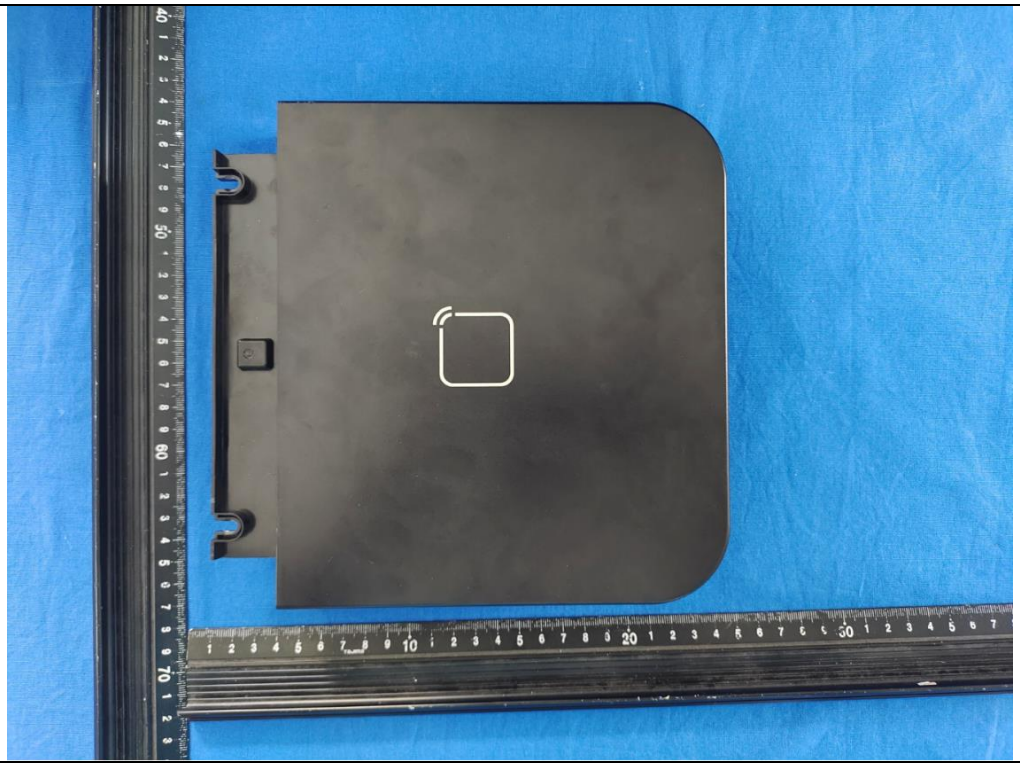

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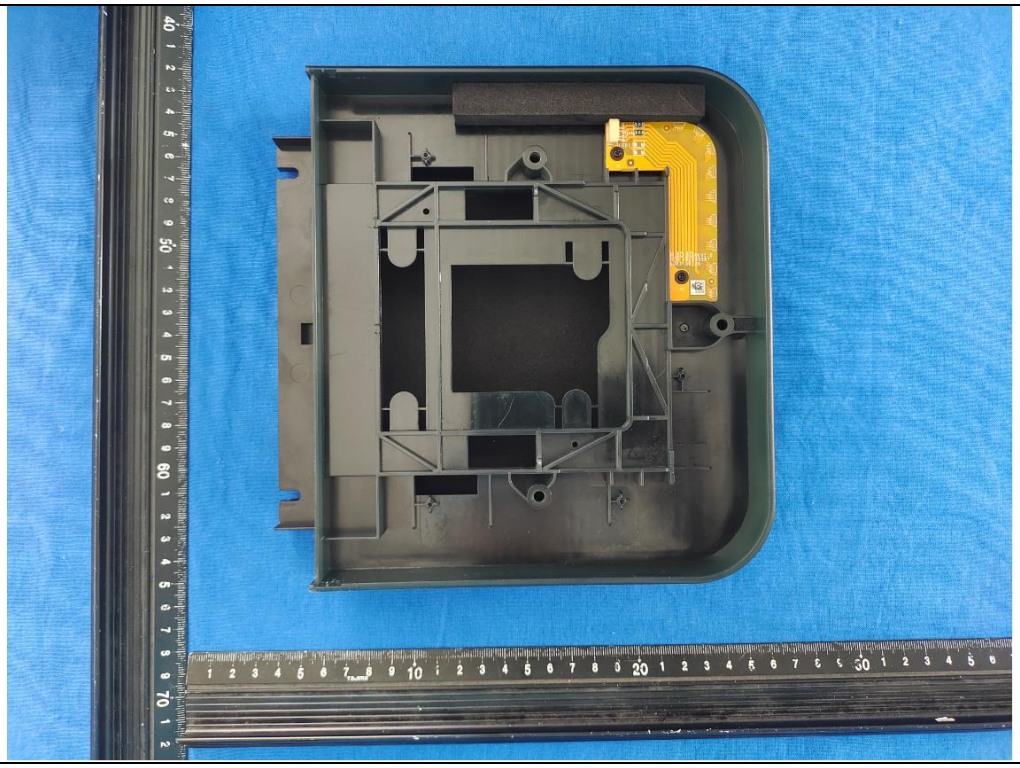

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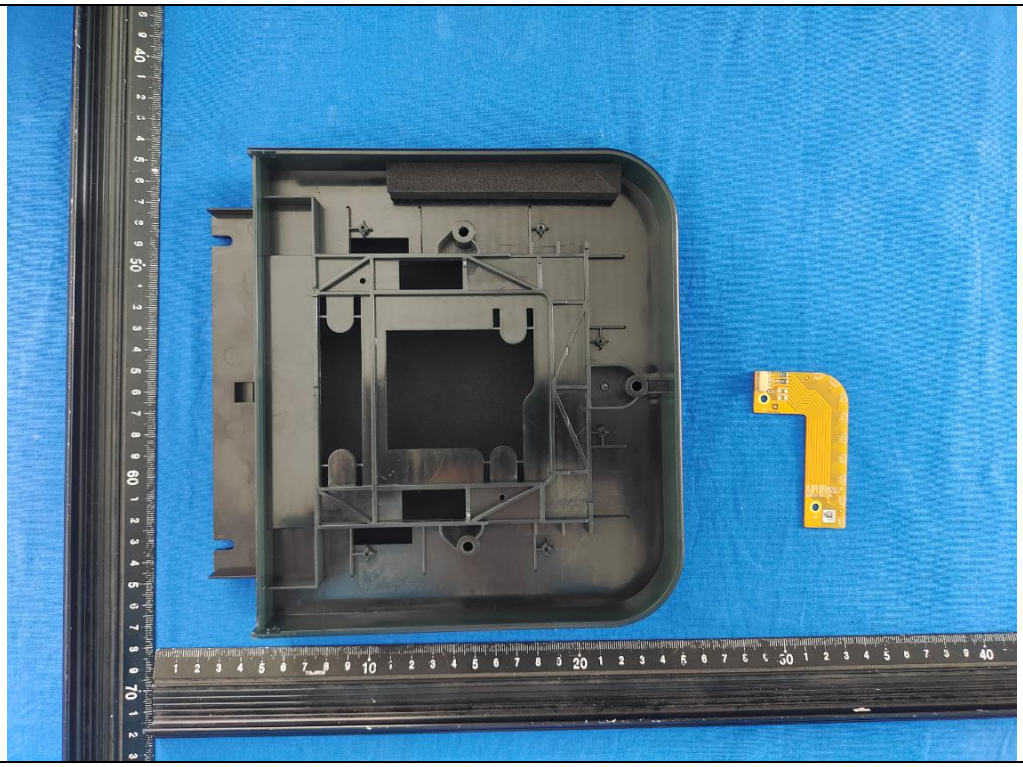
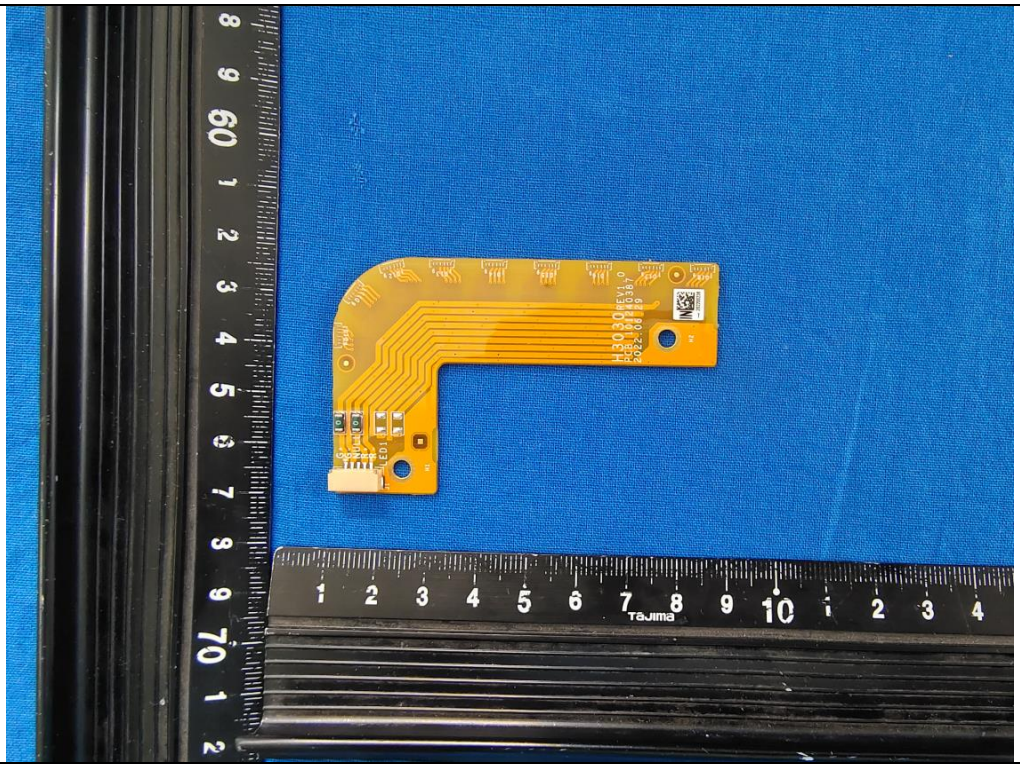


Details of: PCB-1



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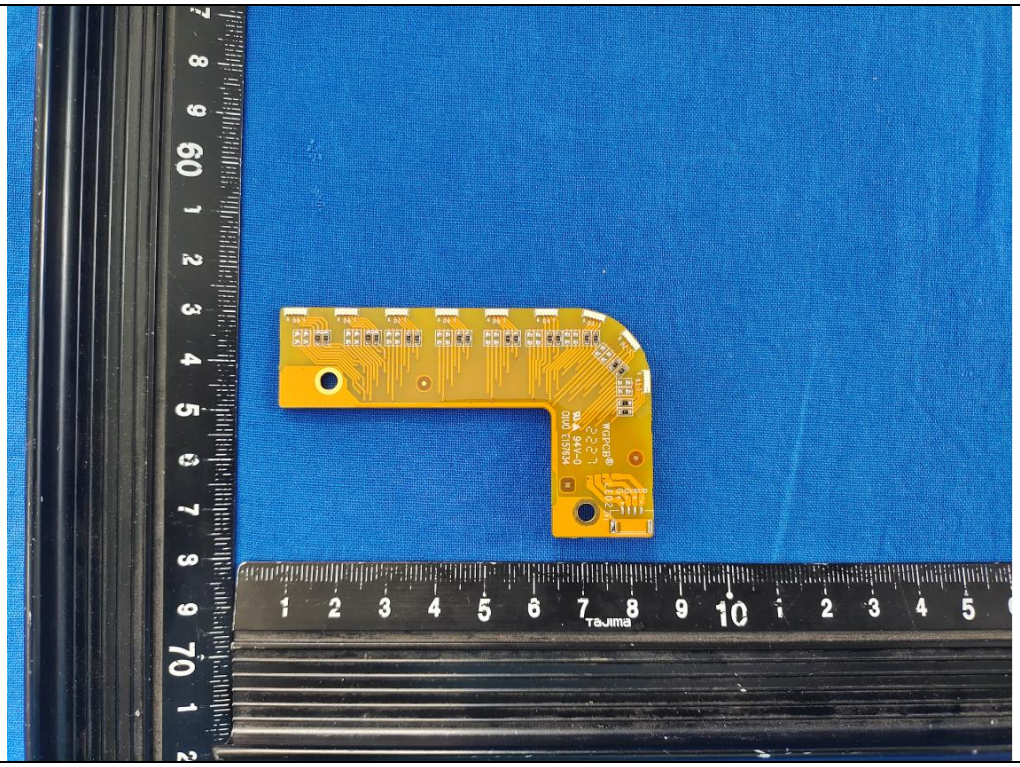
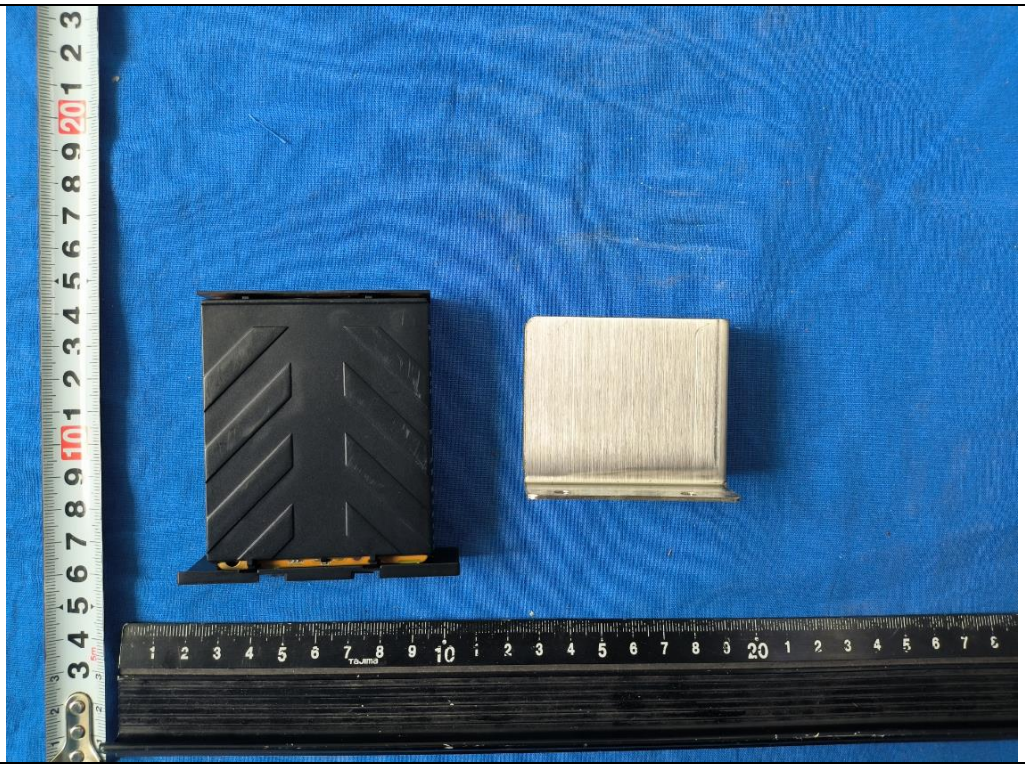


Details of: Internal View



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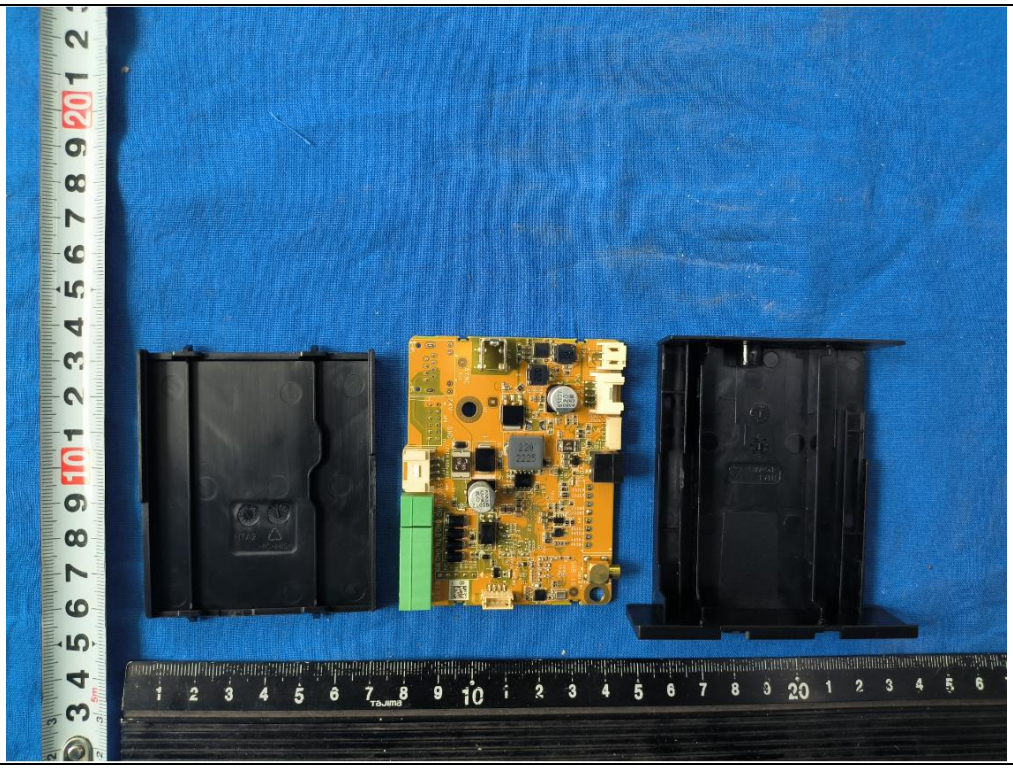

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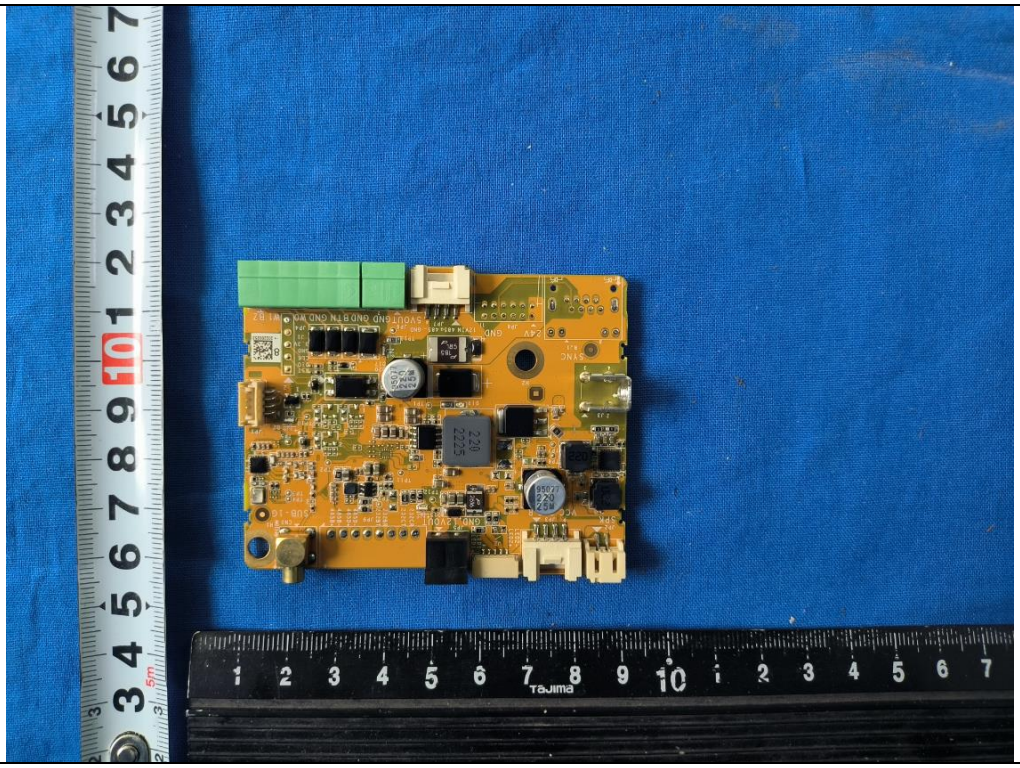

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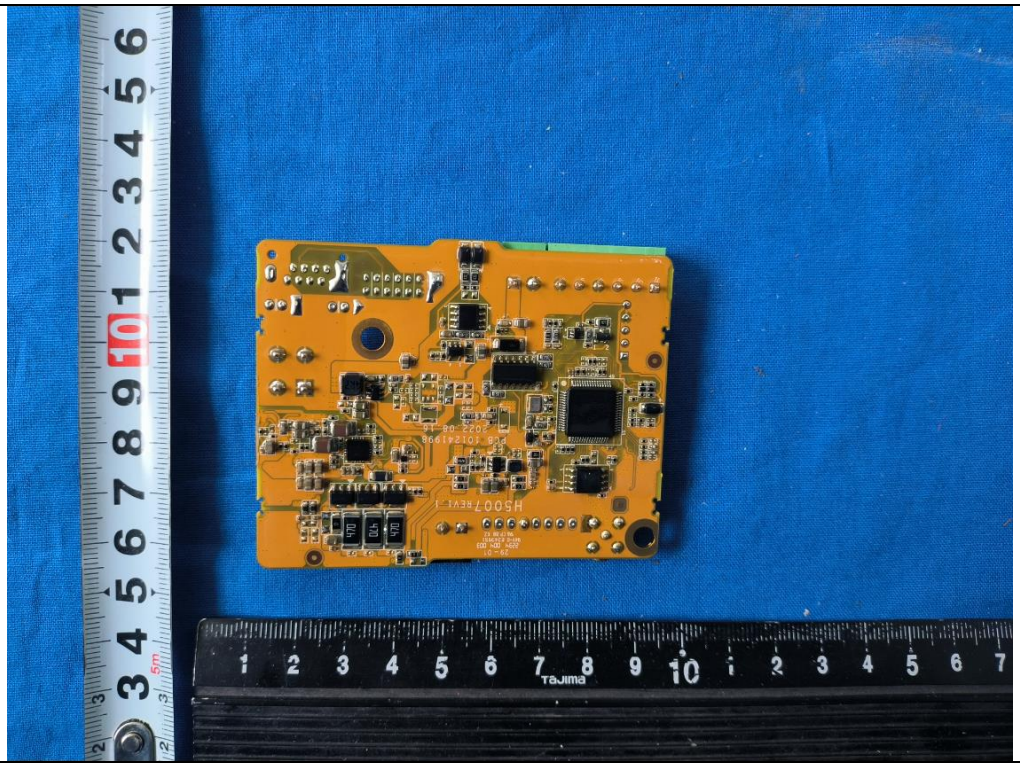
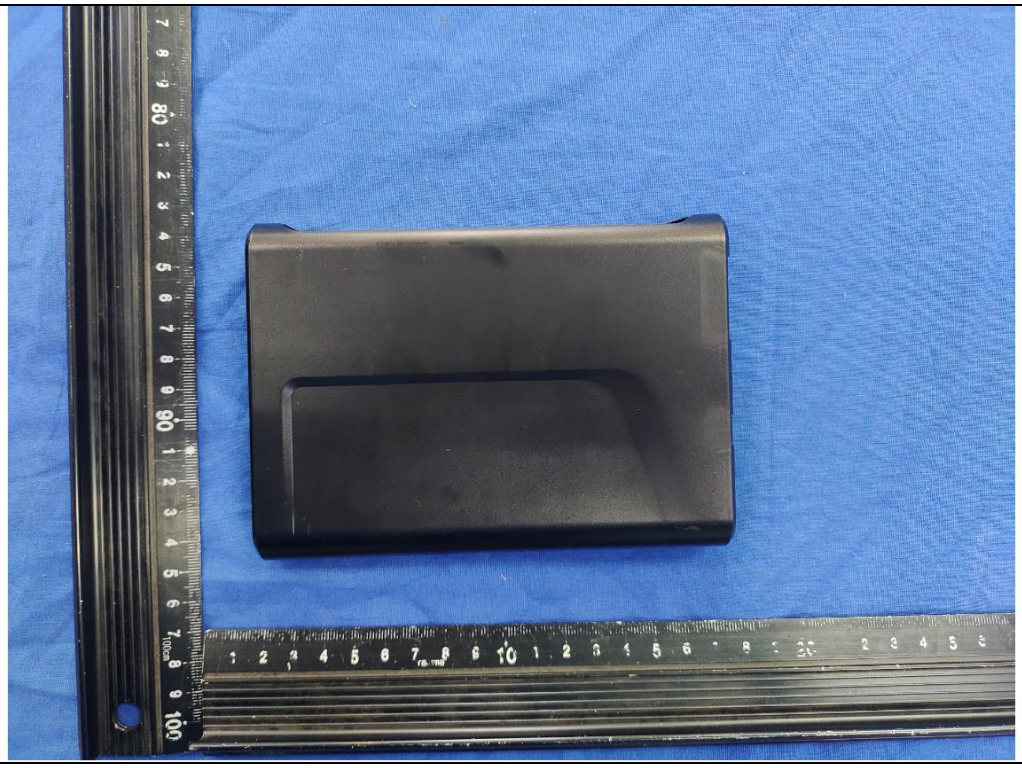
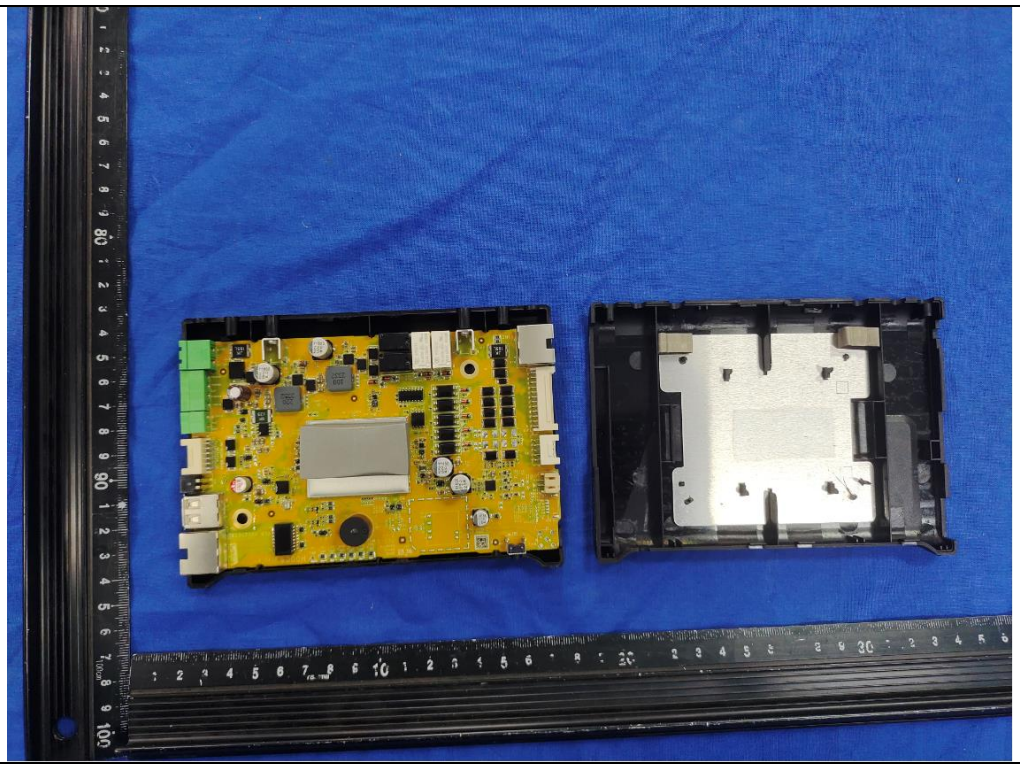


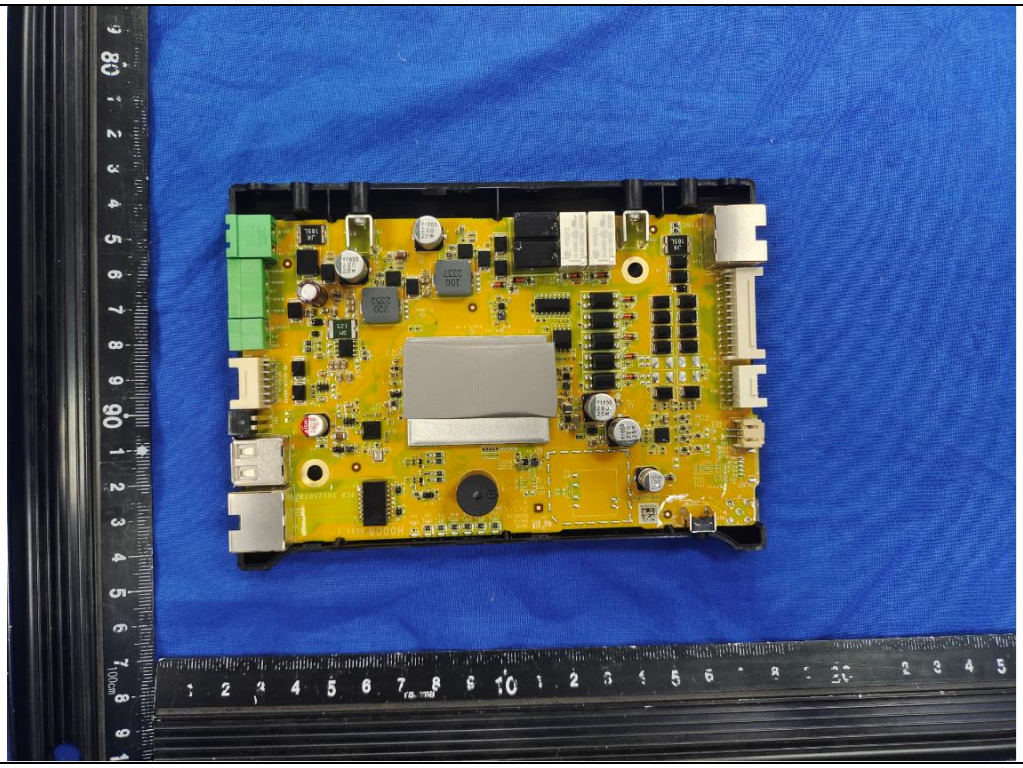
Details of: Internal View



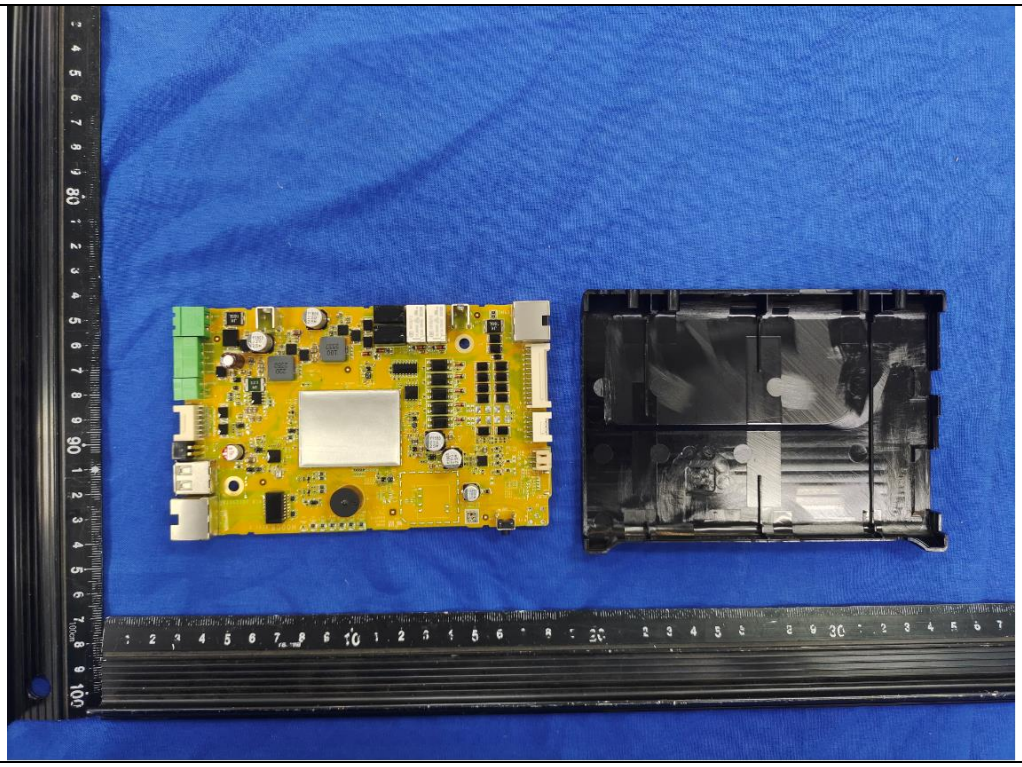
Details of: Internal View



Details of: Internal View



Details of: Internal View



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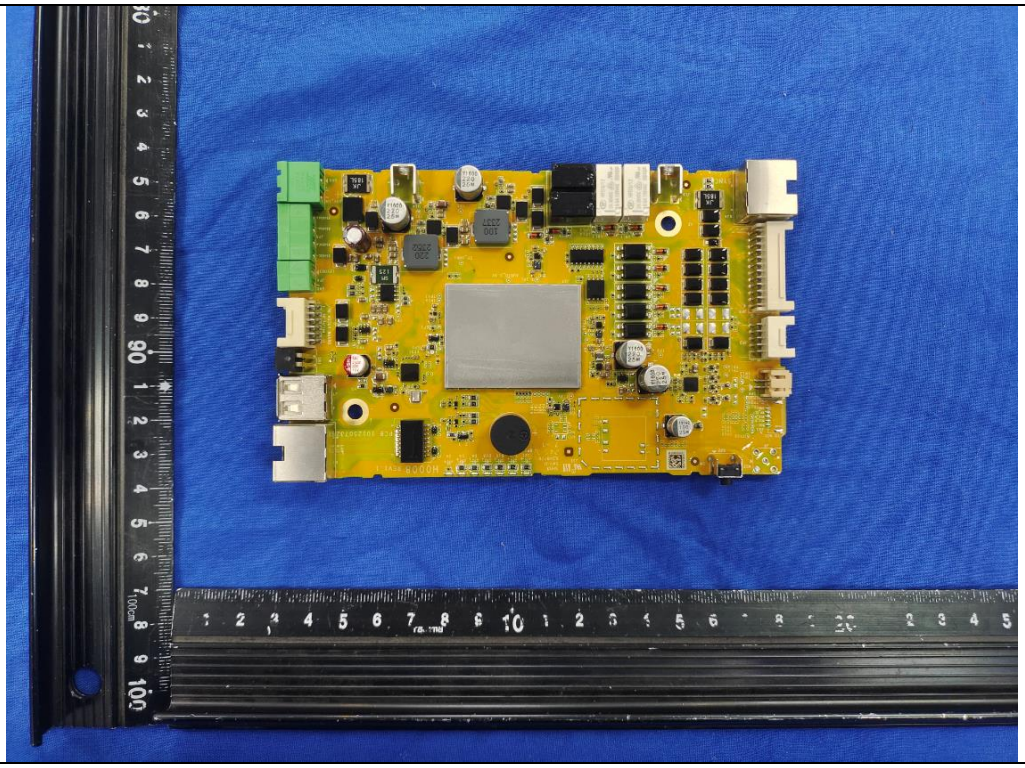

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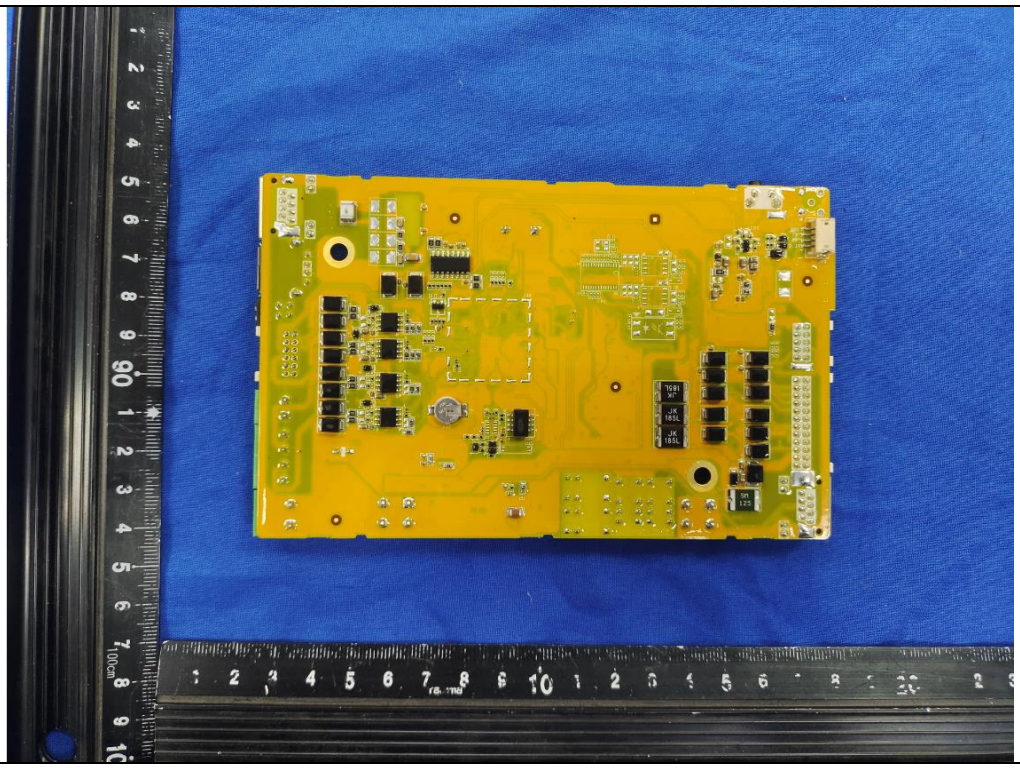
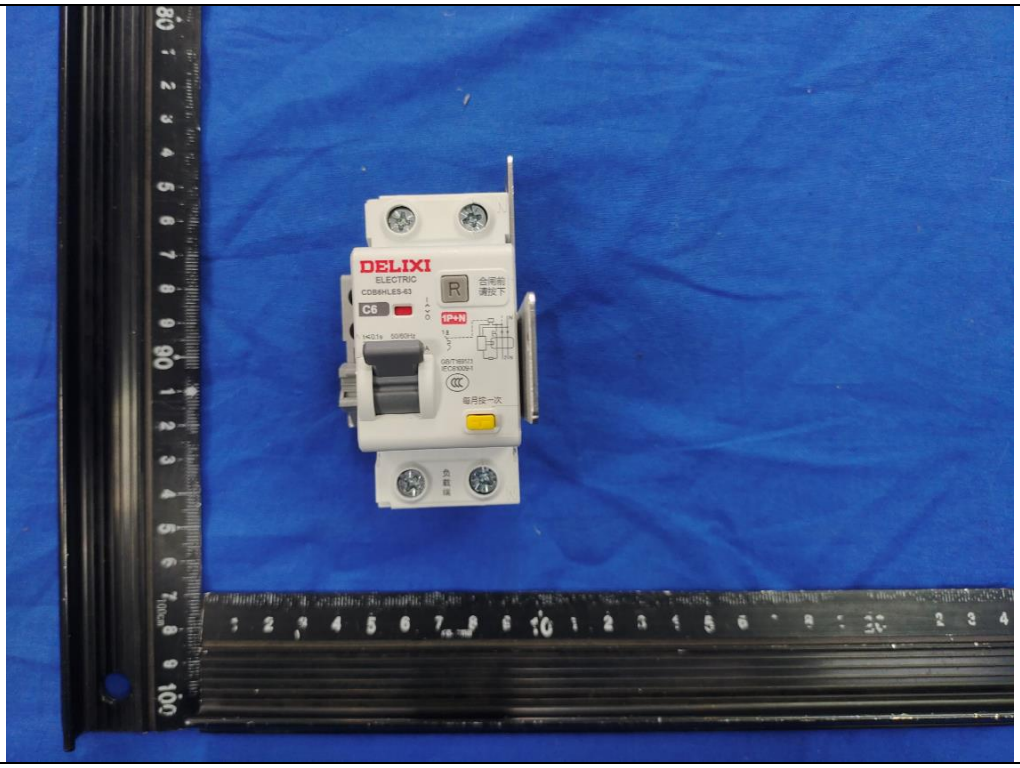
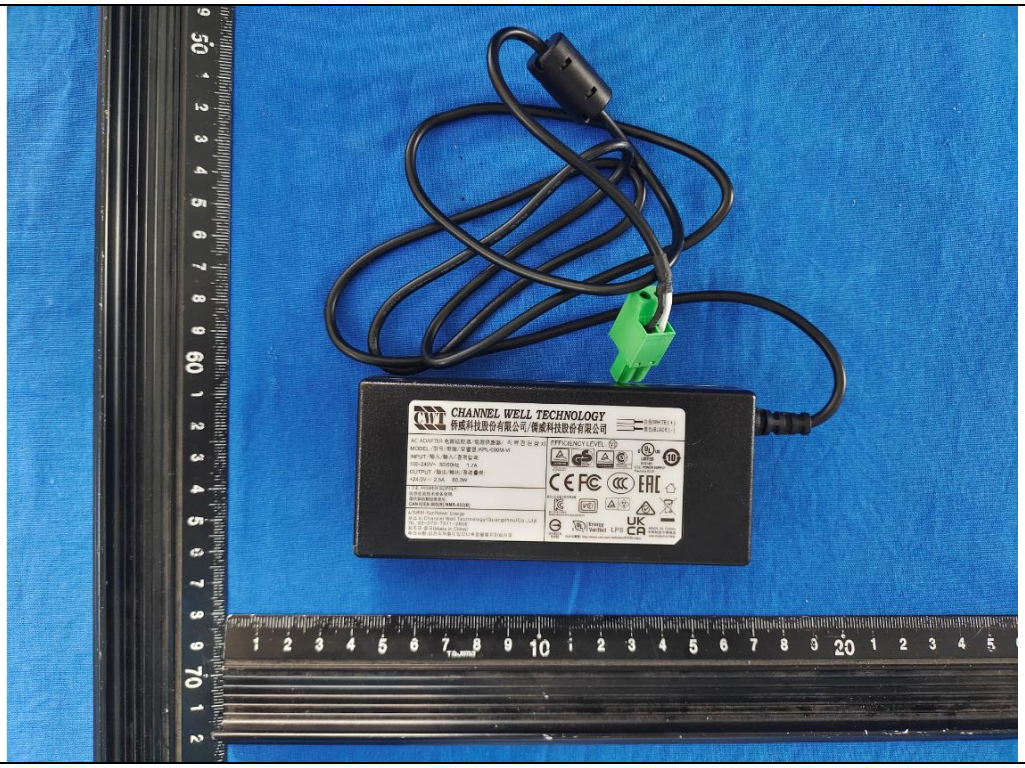


Details of: Circuit breaker

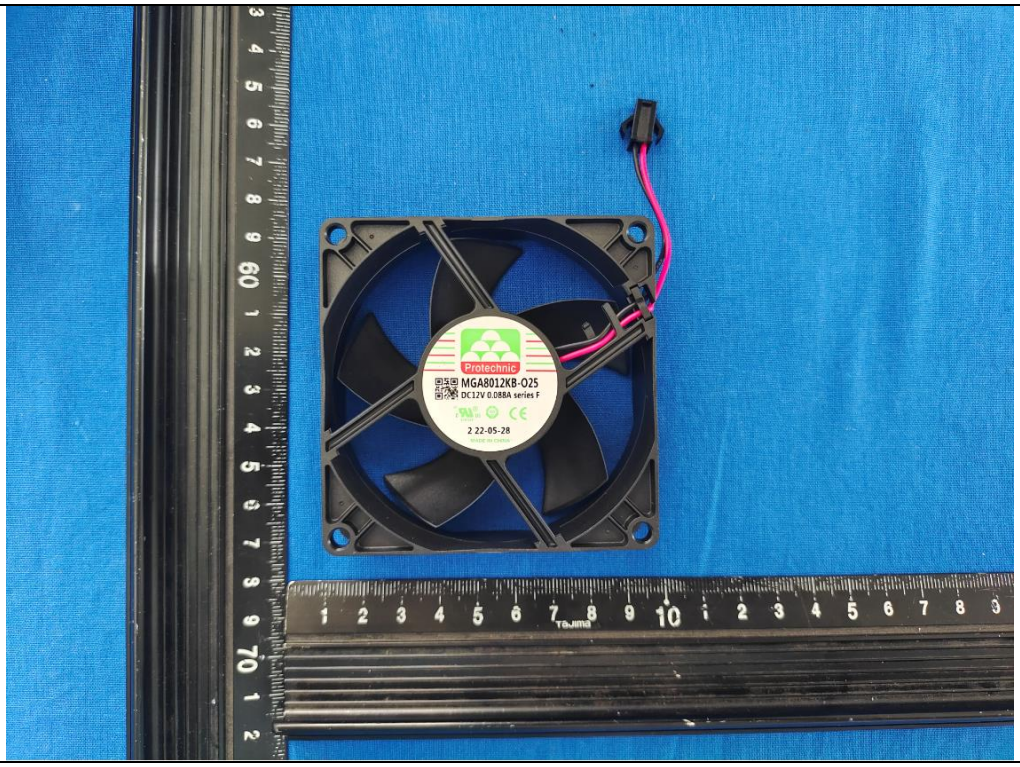


Details of: Building-in power supply (model: PMT-24V150W2BA)

Details of: Building-in power supply (model: KPL-060M-VI)

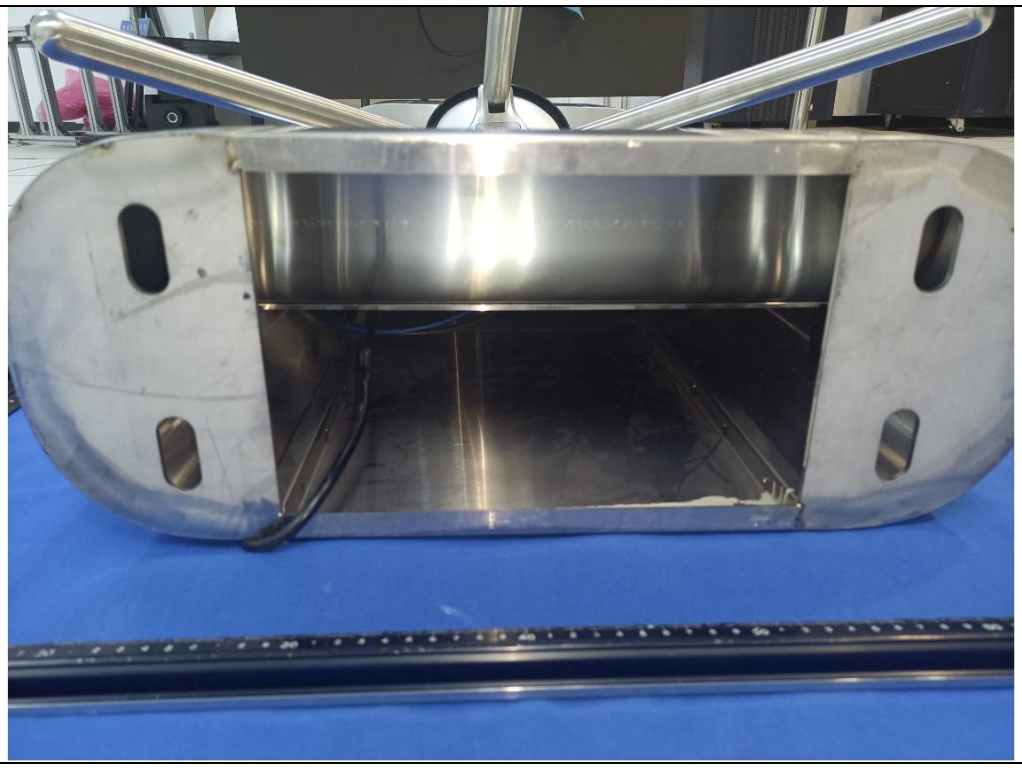


Details of: DC Fan



Details of: General View model name: DS-K3G411BX-R

Details of: General View model name: DS-K3G411BX-R



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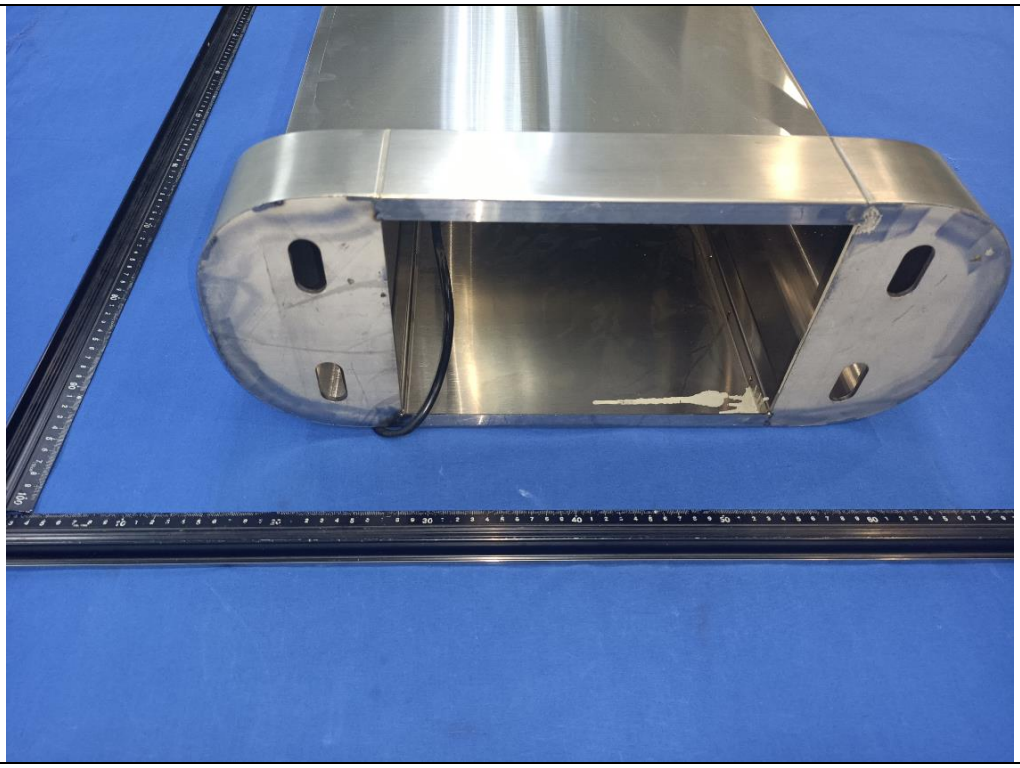
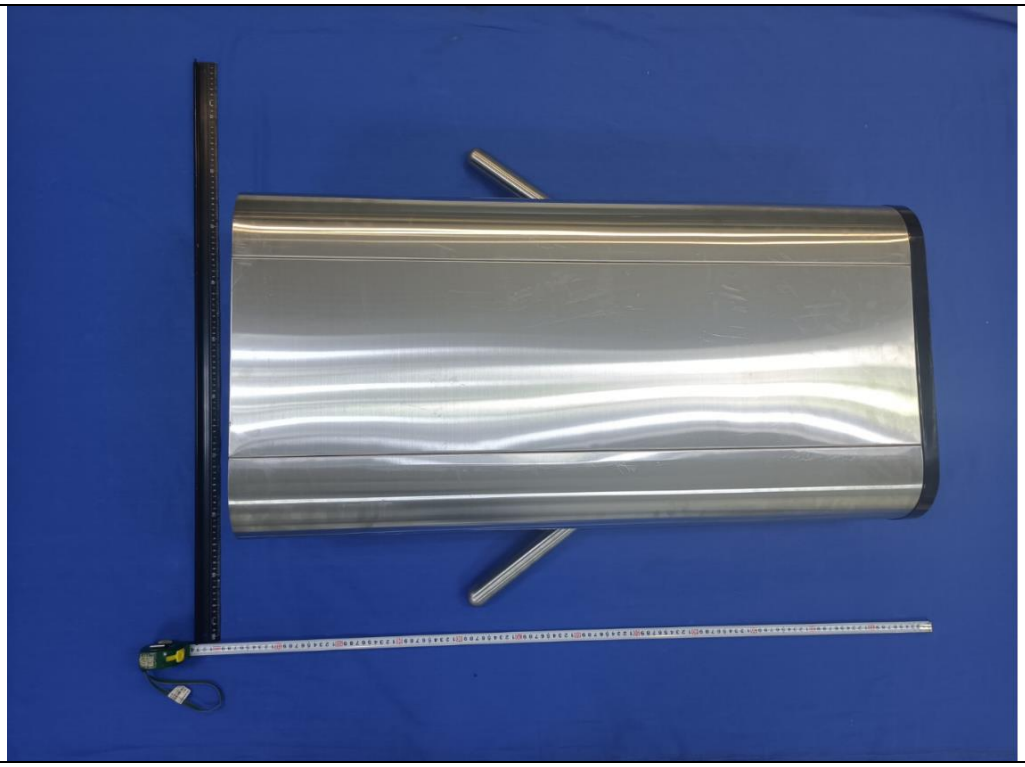


Details of: General View model name: DS-K3G411BX-R



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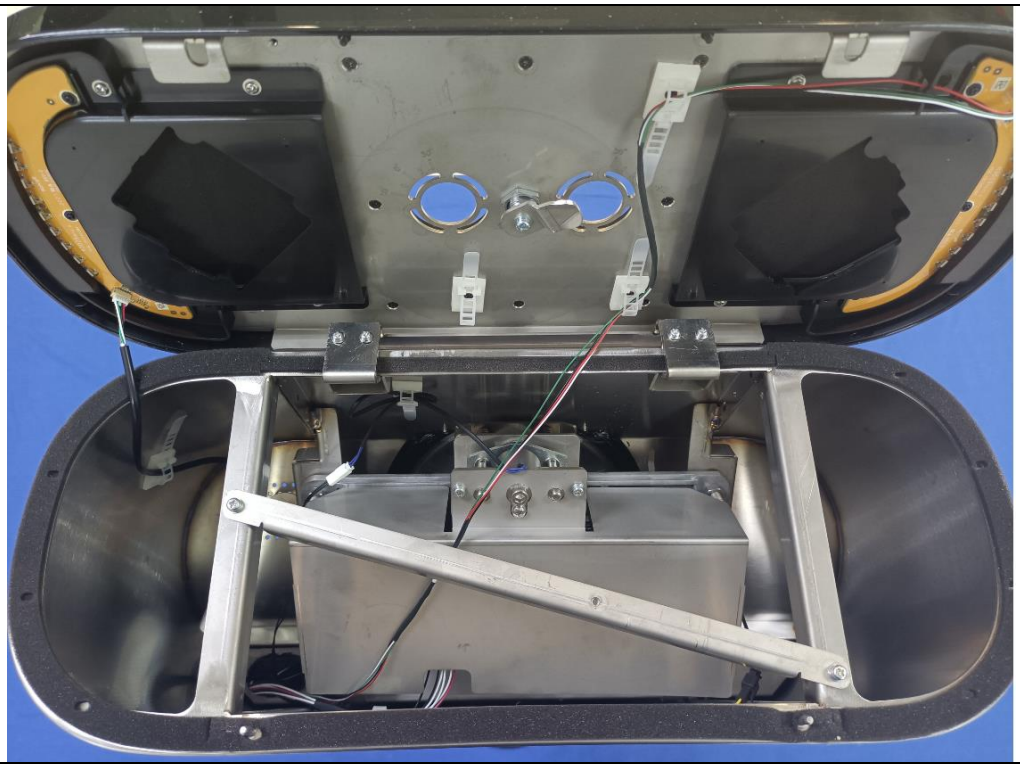

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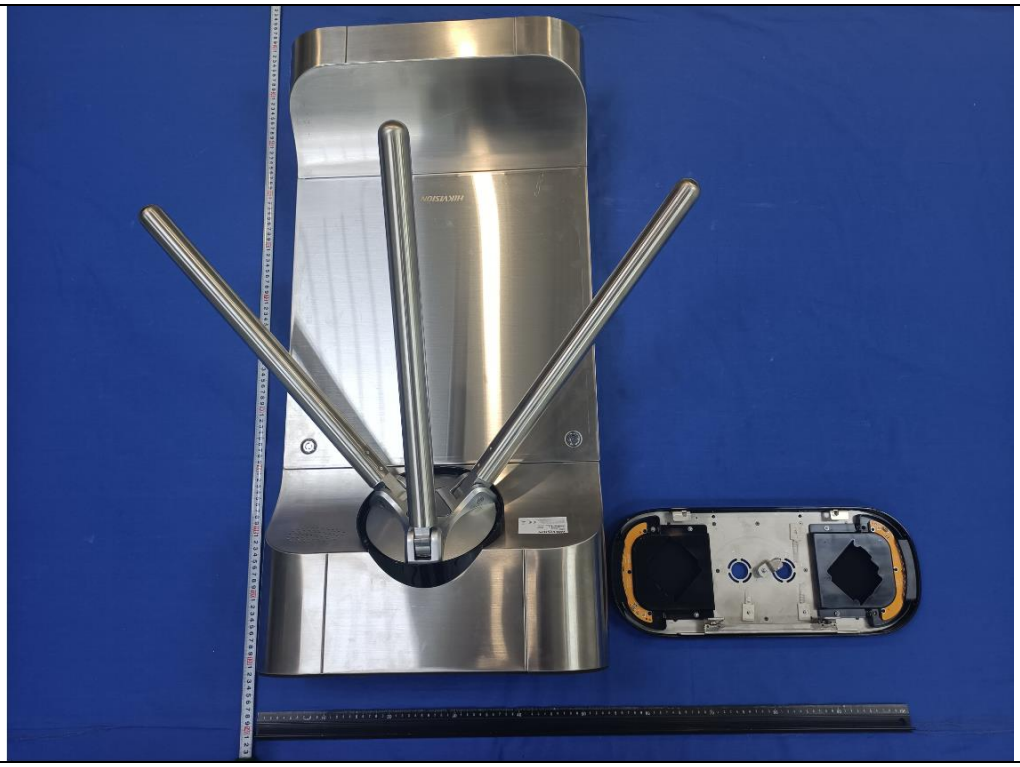
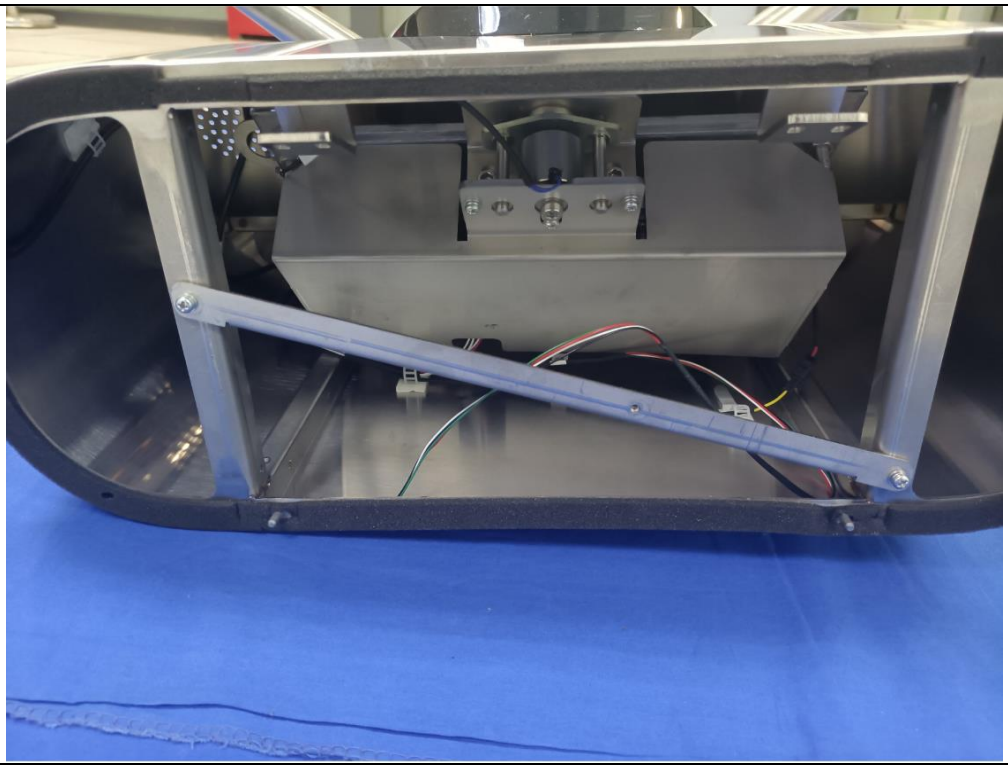


Details of: Internal View model name: DS-K3G411BX-R



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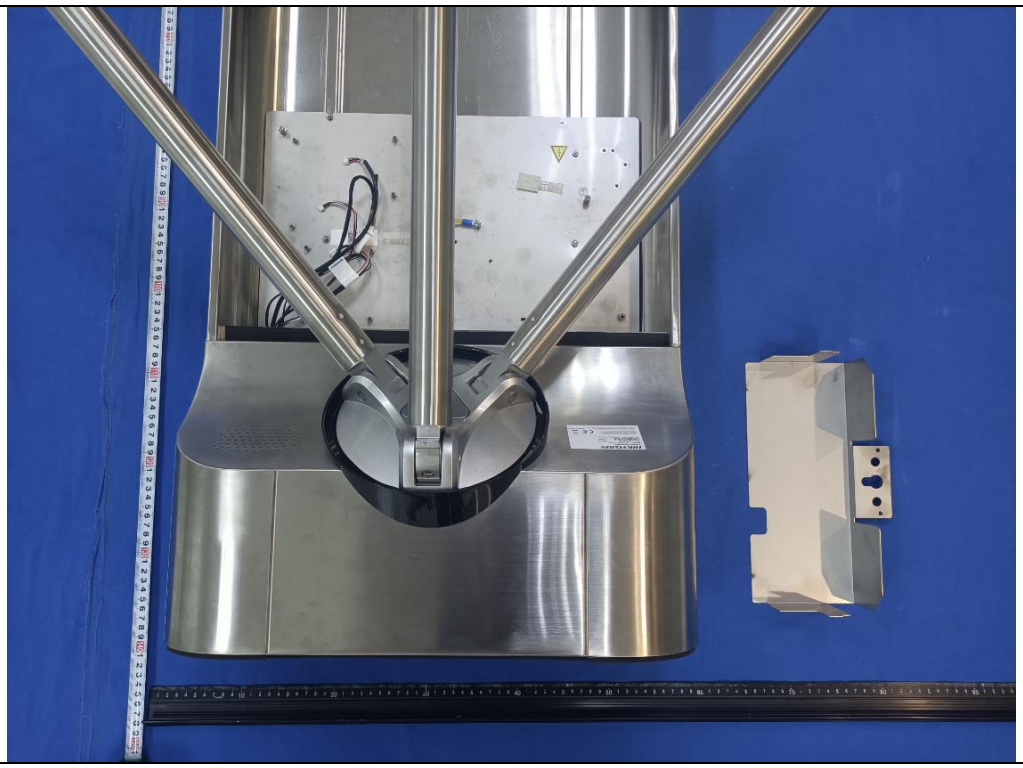

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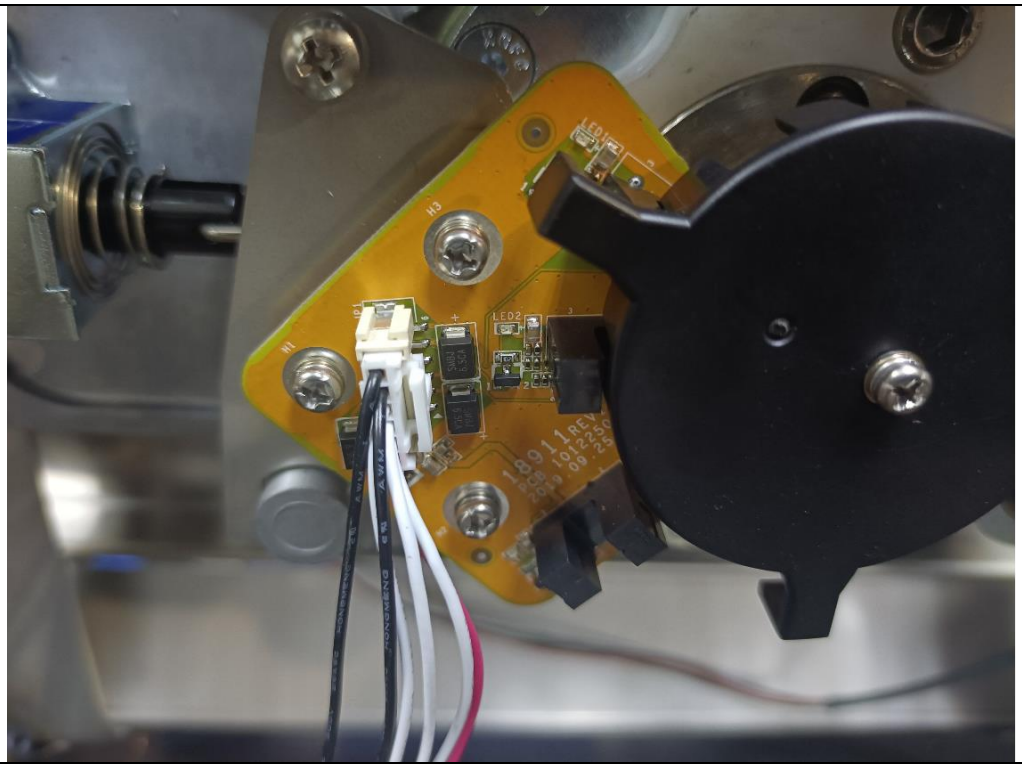

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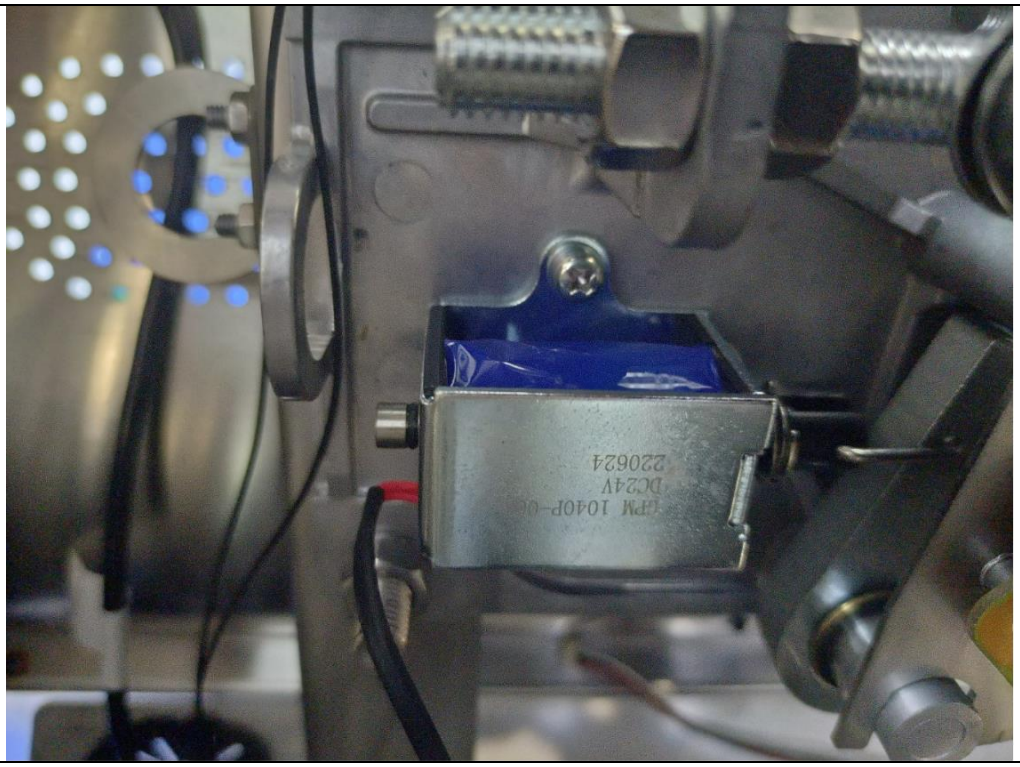

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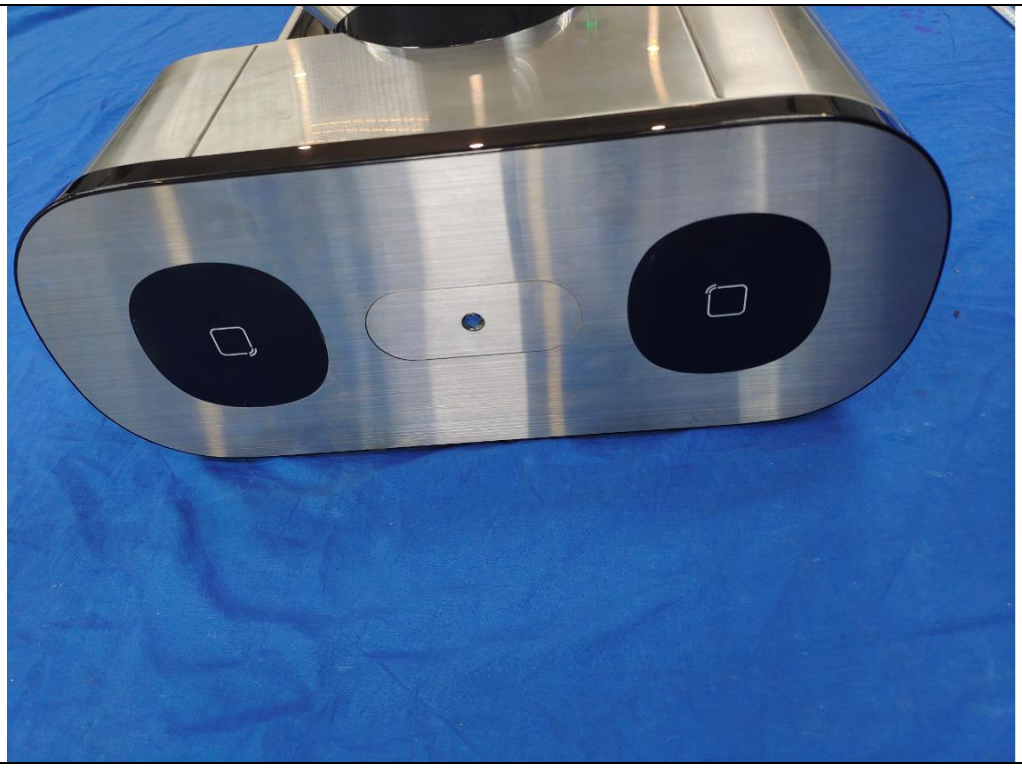
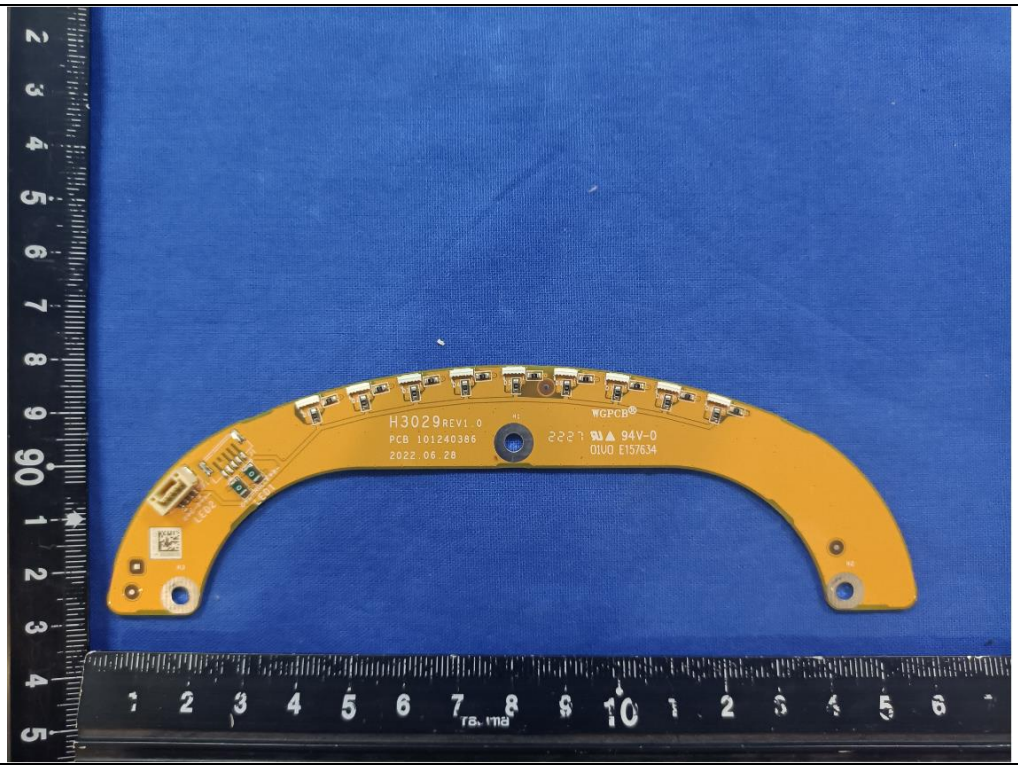
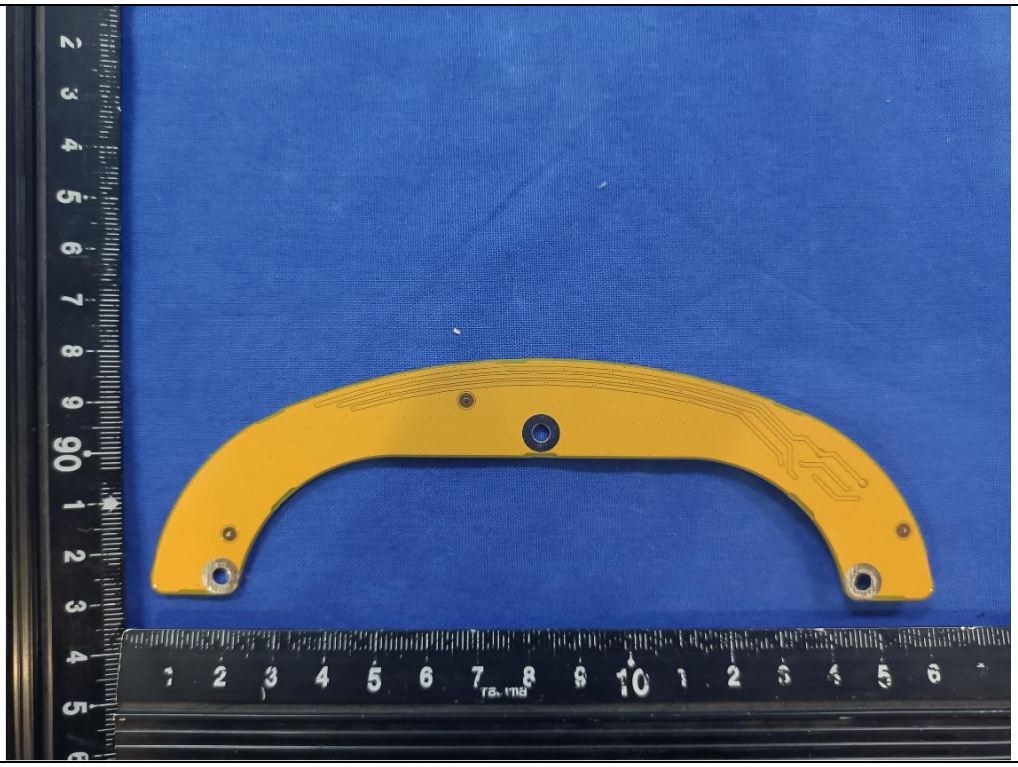


Details of: Internal View model name: DS-K3G411BX-R

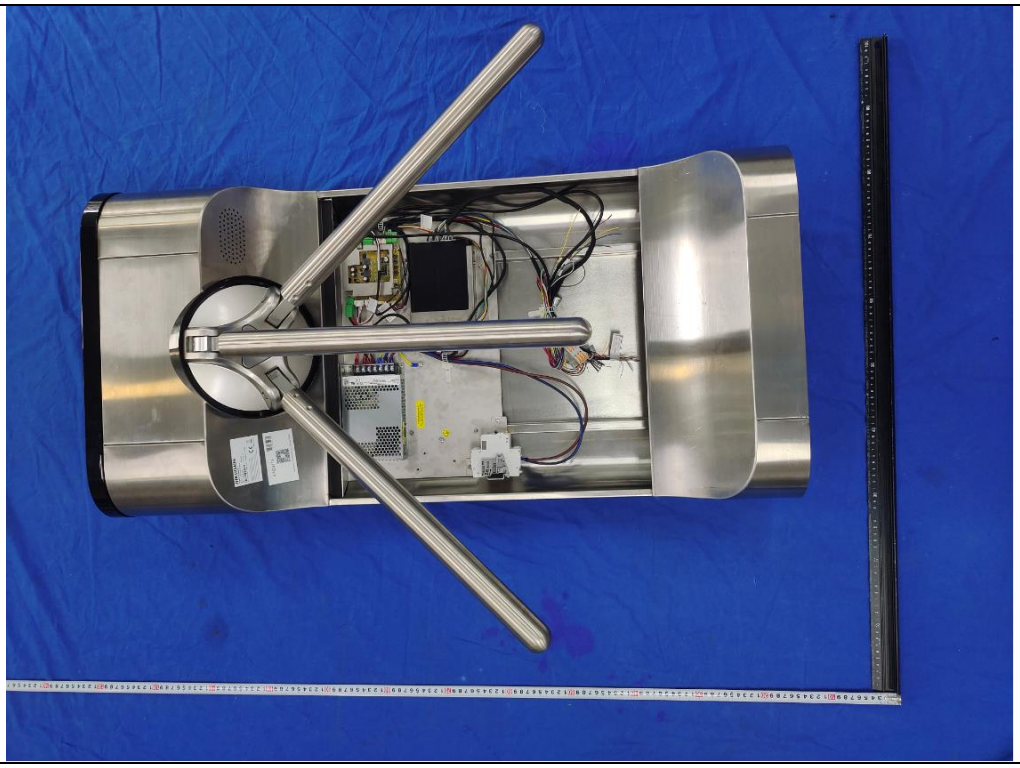
Details of: PCB-1



Details of: PCB-1



Details of: Internal View model name: DS-K3G411BX-R



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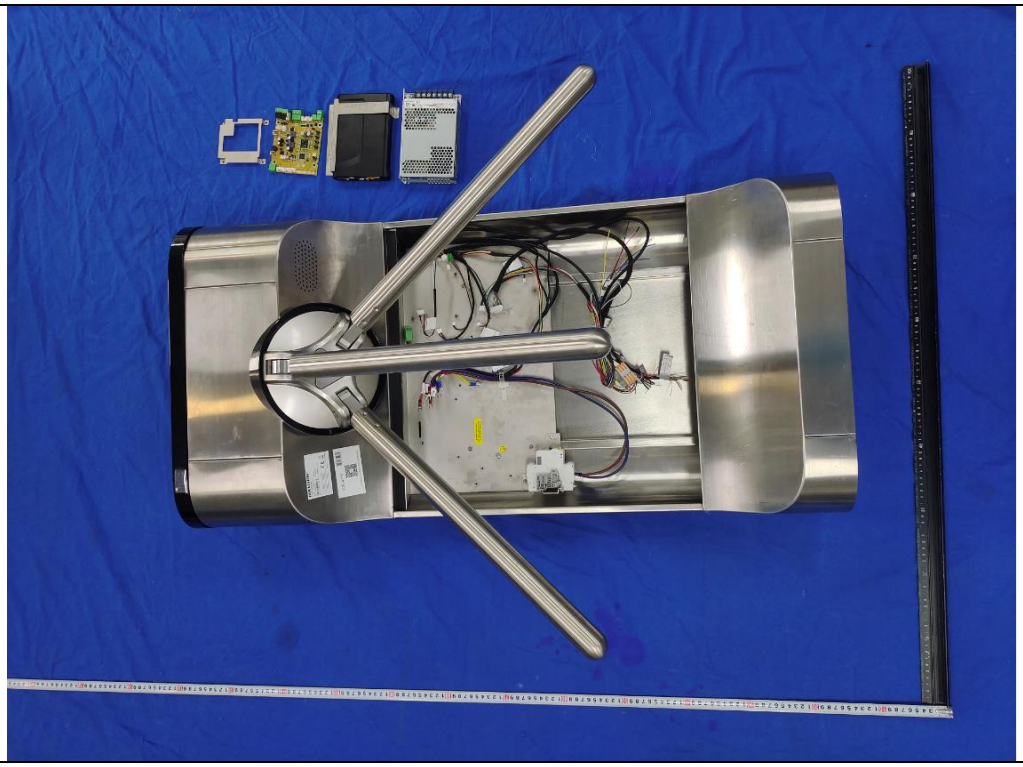
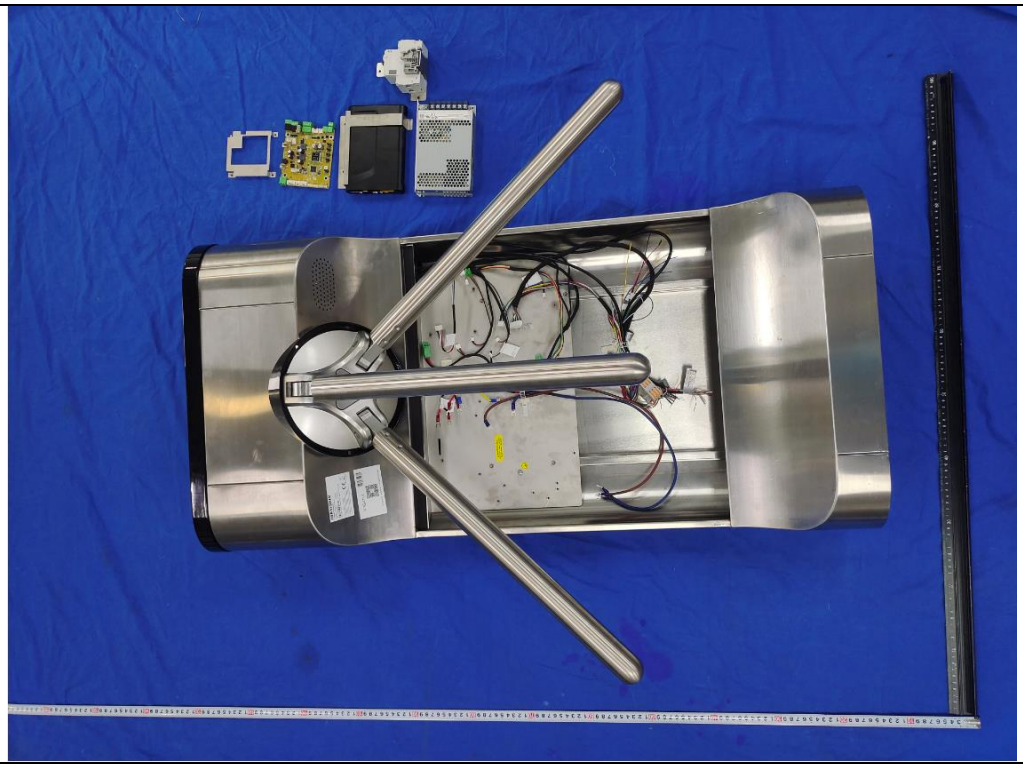


Details of: Internal View model name: DS-K3G411BX-R



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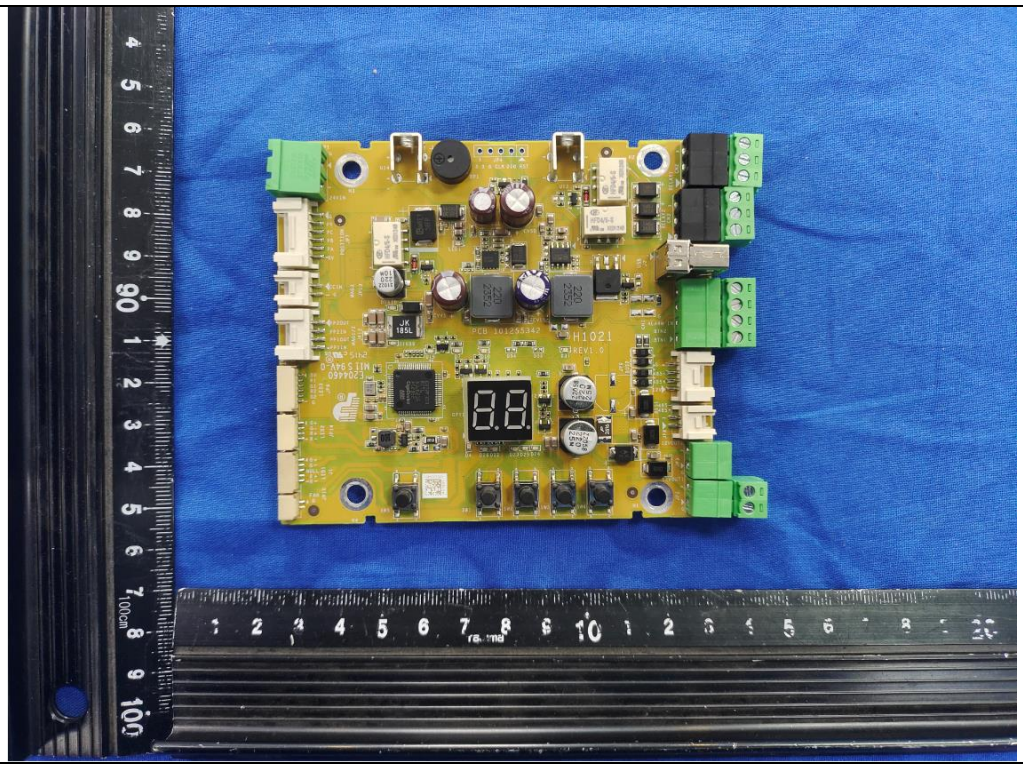

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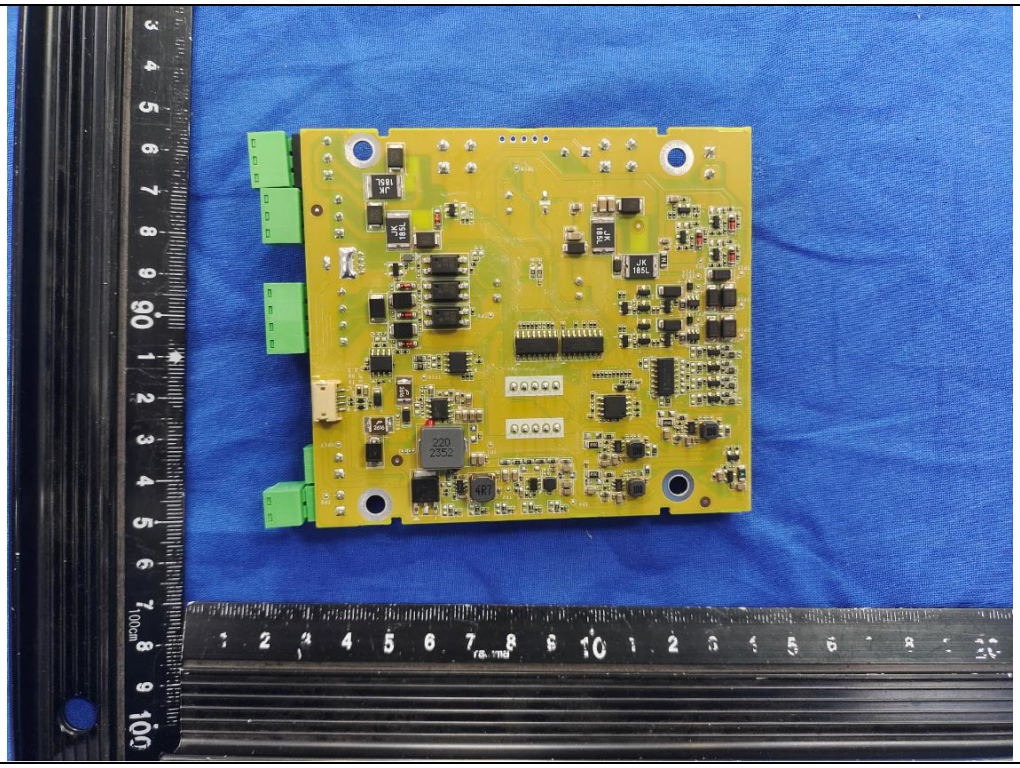

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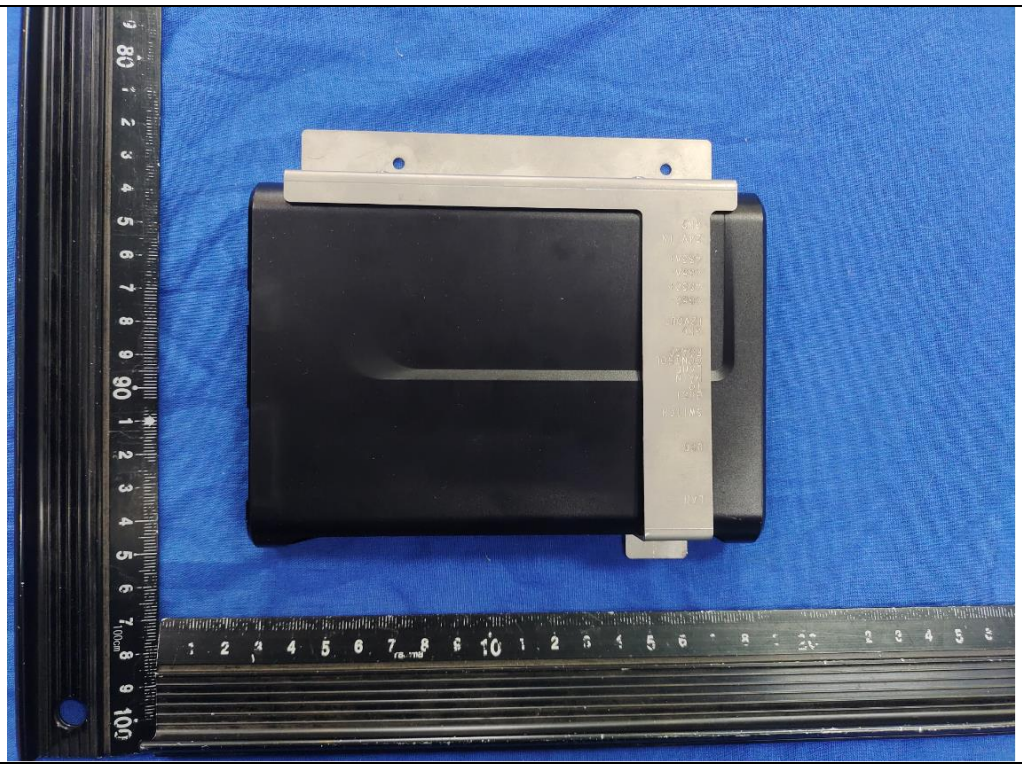

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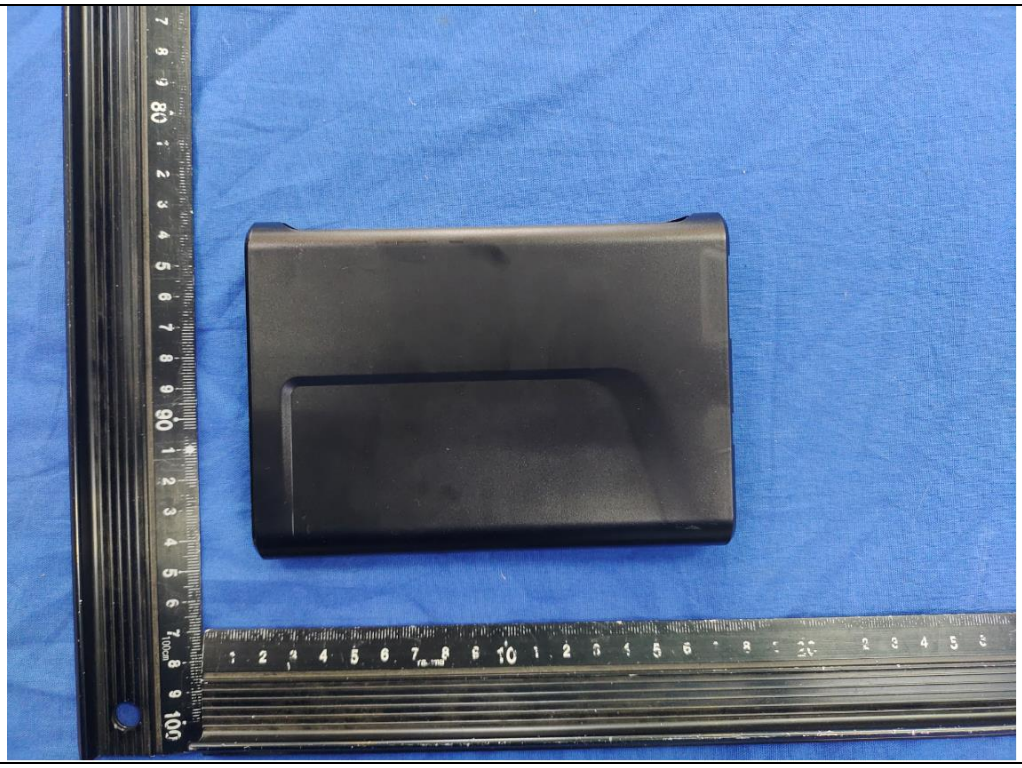

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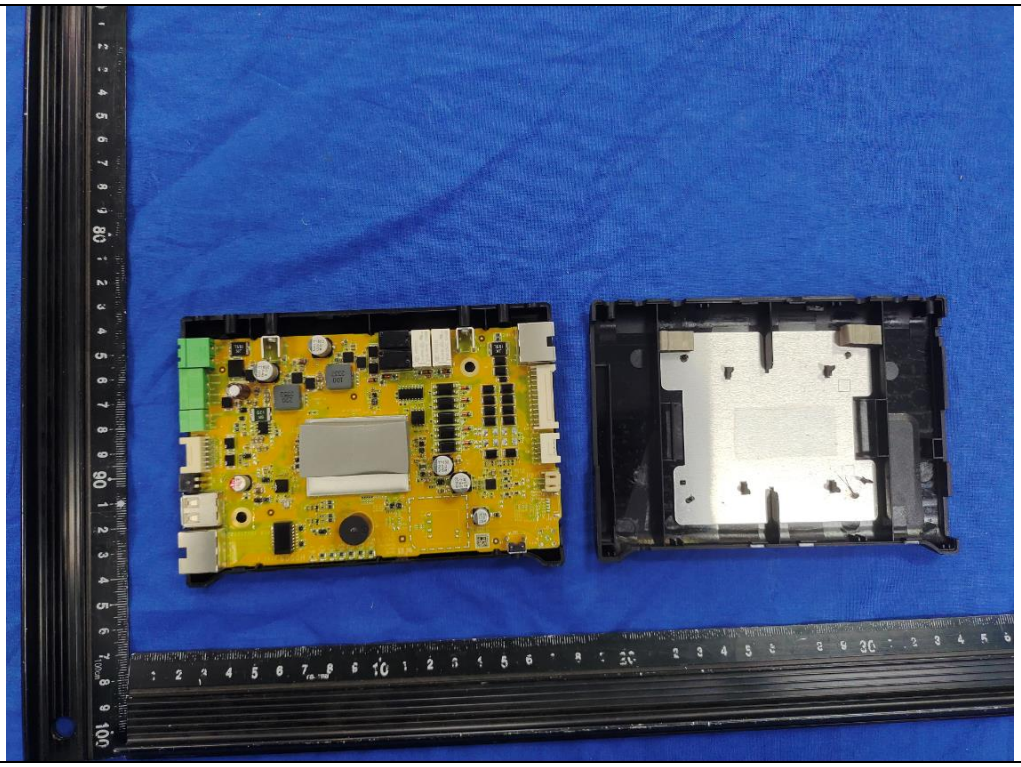

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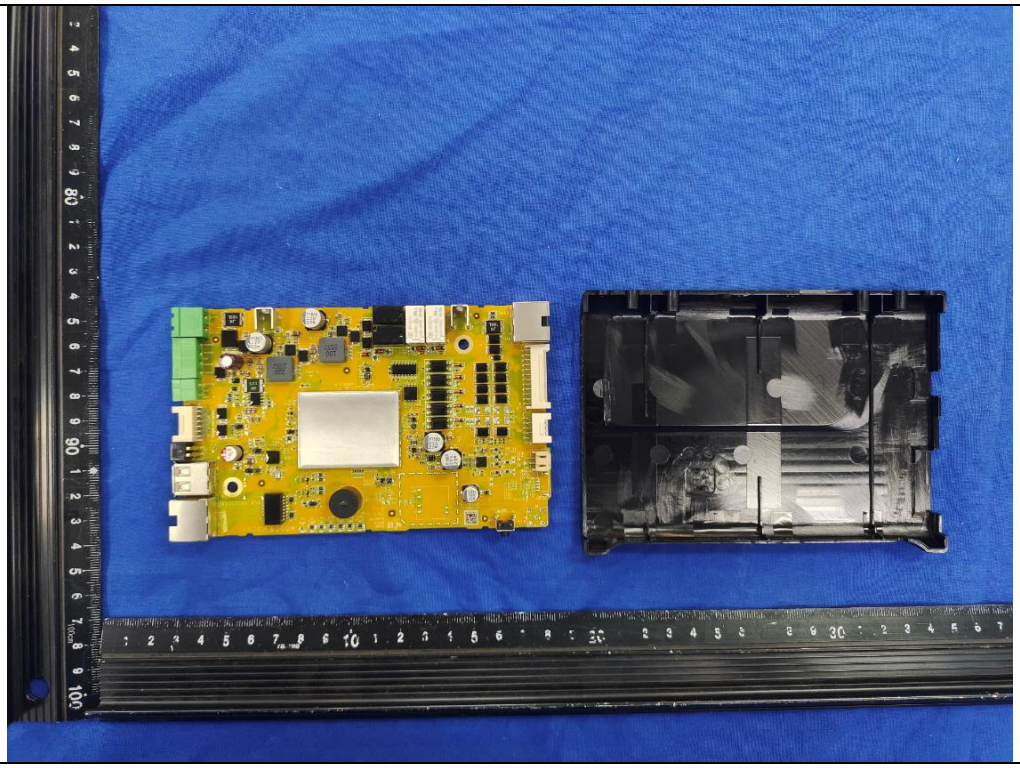

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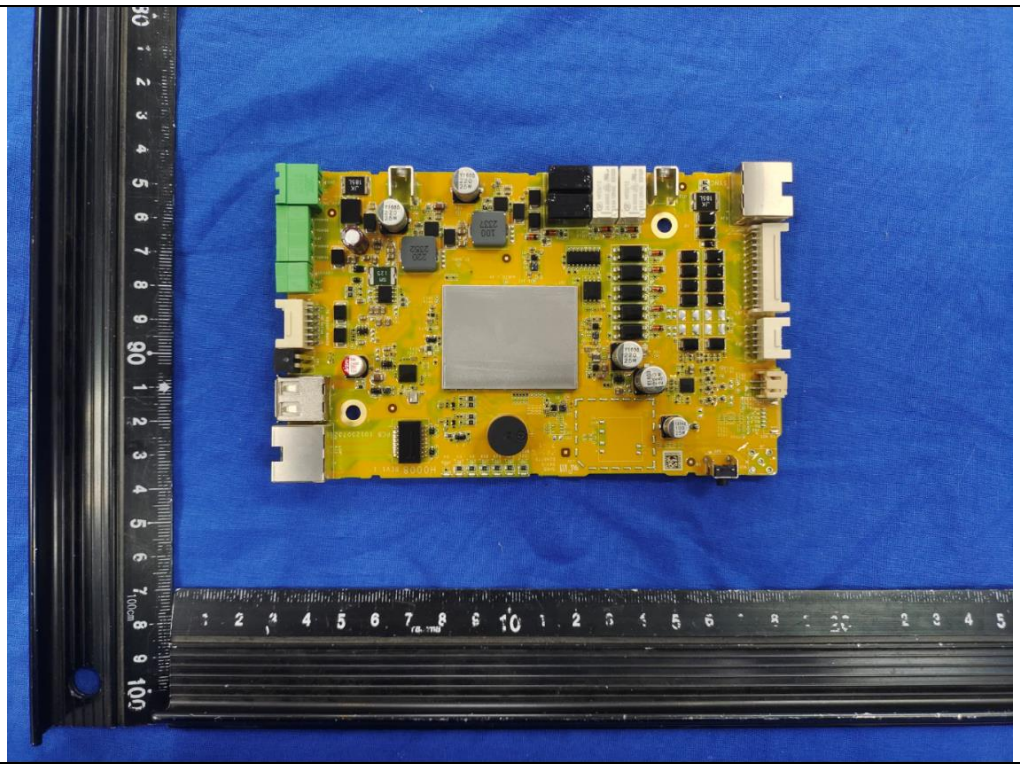

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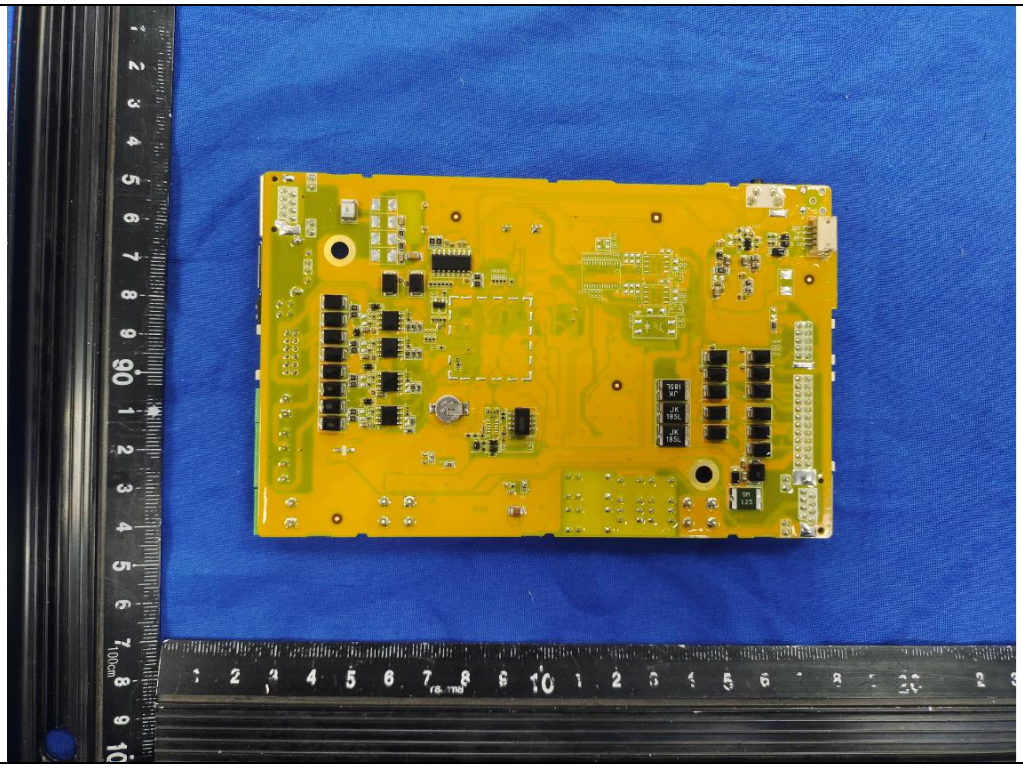
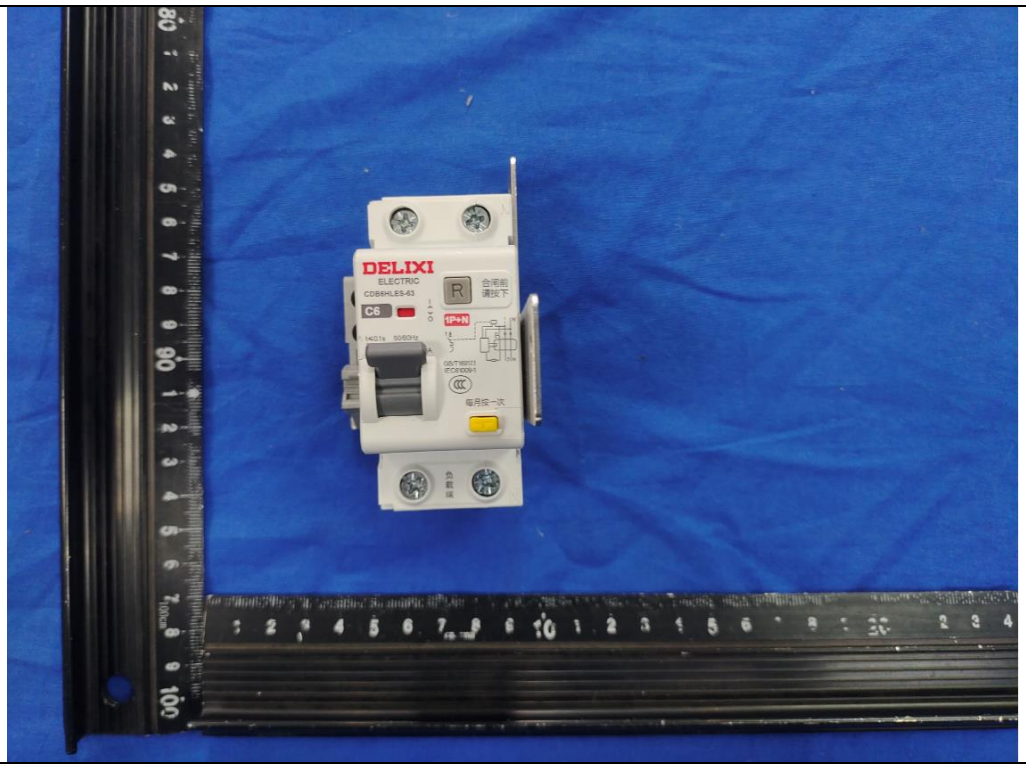
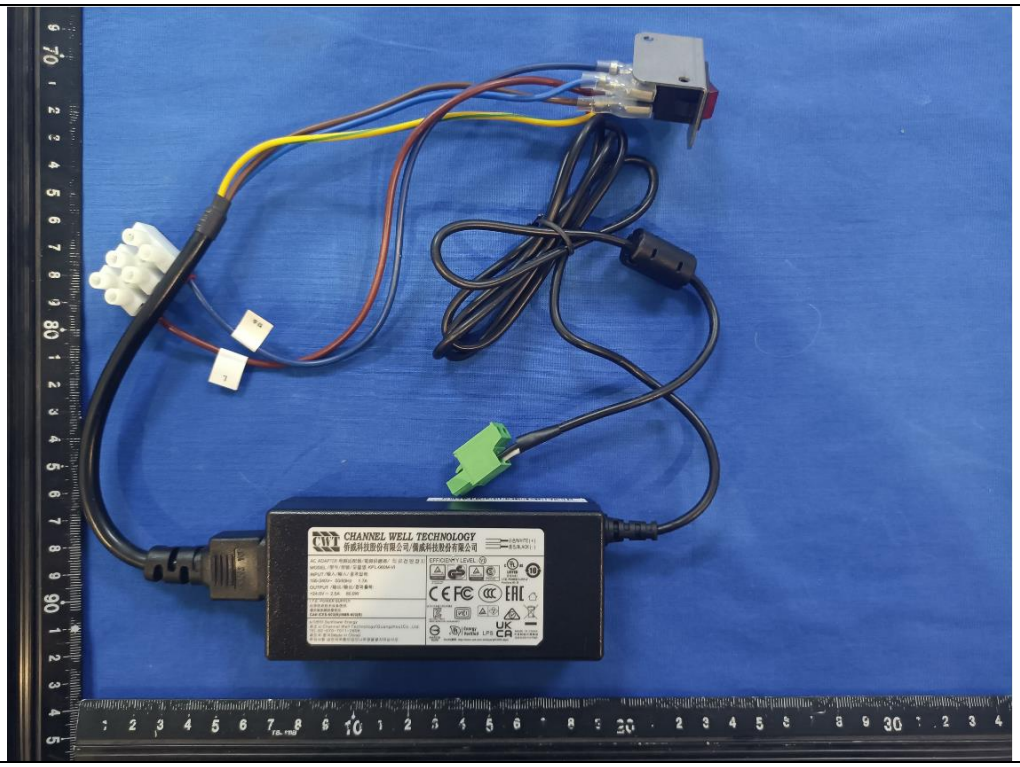


Details of: Circuit breaker



Details of: Building-in power supply (model: PMT-24V150W2BA)

Details of: Building-in power supply (model: KPL-060M-VI)



*******End of Attachment 1*******

<table>
<tr><td colspan="4">IEC62368_1D - ATTACHMENT</td></tr>
<tr><td>Clause</td><td>Requirement + Test</td><td>Result - Remark</td><td>Verdict</td></tr>
<tr><td colspan="4">ATTACHMENT TO TEST REPORT
IEC 62368-1
EUROPEAN GROUP DIFFERENCES AND NATIONAL DIFFERENCES
(Audio/video, information and communication technology equipment - Part 1: Safety requirements)</td></tr>
<tr><td colspan="4">Differences according to ..... : EN 62368-1:2014+A11:2017</td></tr>
<tr><td colspan="4">Attachment Form No. ..... : EU_GD_IEC62368_1D_II
Attachment Originator ..... : Nemko AS
Master Attachment..... : Date 2021-02-04</td></tr>
<tr><td colspan="4"></td></tr>
<tr><td></td><td colspan="2">CENELEC COMMON MODIFICATIONS (EN)</td><td>P</td></tr>
<tr><td></td><td colspan="2">Clauses, subclauses, notes, tables, figures and annexes which are additional to those in IEC 62368-1:2014 are prefixed “Z”.</td><td>P</td></tr>
<tr><td>CONTENTS</td><td colspan="2">Add the following annexes:
Annex ZA (normative) Normative references to international publications with their corresponding European publications
Annex ZB (normative) Special national conditions
Annex ZC (informative) A-deviations
Annex ZD (informative) IEC and CENELEC code designations for flexible cords</td><td>P</td></tr>
<tr><td></td><td colspan="2">Delete all the “country” notes in the reference document (IEC 62368-1:2014) according to the following list:
<table>
<tr><td>0.2.1</td><td>Note</td><td>1</td><td>Note 3</td><td>4.1.15</td><td>Note</td></tr>
<tr><td>4.7.3</td><td>Note 1 and 2</td><td>5.2.2.2</td><td>Note</td><td>5.4.2.3.2.2 Table 13</td><td>Note c</td></tr>
<tr><td>5.4.2.3.2.4</td><td>Note 1 and 3</td><td>5.4.2.5</td><td>Note 2</td><td>5.4.5.1</td><td>Note</td></tr>
<tr><td>5.5.2.1</td><td>Note</td><td>5.5.6</td><td>Note</td><td>5.6.4.2.1</td><td>Note 2 and 3</td></tr>
<tr><td>5.7.5</td><td>Note</td><td>5.7.6.1</td><td>Note 1 and 2</td><td>10.2.1 Table 39</td><td>Note 2, 3 and 4</td></tr>
<tr><td>10.5.3</td><td>Note 2</td><td>10.6.2.1</td><td>Note 3</td><td>F.3.3.6</td><td>Note 3</td></tr>
</table></td><td>P</td></tr>
<tr><td></td><td colspan="2">For special national conditions, see Annex ZB.</td><td>P</td></tr>
<tr><td>1</td><td>Add the following note:
NOTE Z1 The use of certain substances in electrical and electronic equipment is restricted within the EU: see Directive 2011/65/EU.</td><td>Should be considered during national approval.</td><td>P</td></tr>
</table>

IEC62368_1D - ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict
4.Z1	**Add** the following new subclause after 4.9: To protect against excessive current, short-circuits and earth faults in circuits connected to an a.c. **mains**, protective devices shall be included either as integral parts of the equipment or as parts of the building installation, subject to the following, a), b) and c): a) except as detailed in b) and c), protective devices necessary to comply with the requirements of B.3.1 and B.4 shall be included as parts of the equipment; b) for components in series with the mains input to the equipment such as the supply cord, appliance coupler, r.f.i. filter and switch, short-circuit and earth fault protection may be provided by protective devices in the building installation; c) it is permitted for **pluggable equipment type B** or **permanently connected equipment**, to rely on dedicated overcurrent and short-circuit protection in the building installation, provided that the means of protection, e.g. fuses or circuit breakers, is fully specified in the installation instructions. If reliance is placed on protection in the building installation, the installation instructions shall so state, except that for **pluggable equipment type A** the building installation shall be regarded as providing protection in accordance with the rating of the wall socket outlet.		P
5.4.2.3.2.4	**Add** the following to the end of this subclause: The requirement for interconnection with **external circuit** is in addition given in EN 50491-3:2009.		N/A
10.2.1	Add the following to [c] and [d] in table 39: For additional requirements, see 10.5.1.		N/A

IEC62368_1D - ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict
10.5.1	**Add** the following after the first paragraph: *For RS 1 compliance is checked by measurement under the following conditions:* *In addition to the normal operating conditions, all controls adjustable from the outside by hand, by any object such as a tool or a coin, and those internal adjustments or presets which are not locked in a reliable manner, are adjusted so as to give maximum radiation whilst maintaining an intelligible picture for 1 h, at the end of which the measurement is made.* NOTE Z1 Soldered joints and paint lockings are examples of adequate locking. *The dose-rate is determined by means of a radiation monitor with an effective area of 10 cm², at any point 10 cm from the outer surface of the apparatus.* *Moreover, the measurement shall be made under fault conditions causing an increase of the high-voltage, provided an intelligible picture is maintained for 1 h, at the end of which the measurement is made.* *For RS1, the dose-rate shall not exceed 1 µSv/h taking account of the background level.* NOTE Z2 These values appear in Directive 96/29/Euratom of 13 May 1996.		N/A
10.6.1	**Add** the following paragraph to the end of the subclause: EN 71-1:2011, 4.20 and the related tests methods and measurement distances apply.		N/A
10.Z1	**Add** the following new subclause after 10.6.5. **10.Z1 Non-ionizing radiation from radio frequencies in the range 0 to 300 GHz** The amount of non-ionizing radiation is regulated by European Council Recommendation 1999/519/EC of 12 July 1999 on the limitation of exposure of the general public to electromagnetic fields (0 Hz to 300 GHz). For intentional radiators, ICNIRP guidelines should be taken into account for Limiting Exposure to Time-Varying Electric, Magnetic, and Electromagnetic Fields (up to 300 GHz). For hand-held and body-mounted devices, attention is drawn to EN 50360 and EN 50566		N/A
G.7.1	**Add** the following note: NOTE Z1 The harmonized code designations corresponding to the IEC cord types are given in Annex ZD.		N/A

IEC62368_1D - ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict
Bibliography	**Add** the following standards: **Add** the following notes for the standards indicated: IEC 60130-9 NOTE Harmonized as EN 60130-9. IEC 60269-2 NOTE Harmonized as HD 60269-2. IEC 60309-1 NOTE Harmonized as EN 60309-1. IEC 60364 NOTE some parts harmonized in HD 384/HD 60364 series. IEC 60601-2-4 NOTE Harmonized as EN 60601-2-4. IEC 60664-5 NOTE Harmonized as EN 60664-5. IEC 61032:1997 NOTE Harmonized as EN 61032:1998 (not modified). IEC 61508-1 NOTE Harmonized as EN 61508-1. IEC 61558-2-1 NOTE Harmonized as EN 61558-2-1. IEC 61558-2-4 NOTE Harmonized as EN 61558-2-4. IEC 61558-2-6 NOTE Harmonized as EN 61558-2-6. IEC 61643-1 NOTE Harmonized as EN 61643-1. IEC 61643-21 NOTE Harmonized as EN 61643-21. IEC 61643-311 NOTE Harmonized as EN 61643-311. IEC 61643-321 NOTE Harmonized as EN 61643-321. IEC 61643-331 NOTE Harmonized as EN 61643-331.		N/A
ZB	**ANNEX ZB, SPECIAL NATIONAL CONDITIONS (EN)**		N/A
4.1.15	**Denmark, Finland, Norway** and **Sweden** To the end of the subclause the following is added: **Class I pluggable equipment type A** intended for connection to other equipment or a network shall, if safety relies on connection to reliable earthing or if surge suppressors are connected between the network terminals and **accessible** parts, have a marking stating that the equipment shall be connected to an earthed **mains** socket-outlet. The marking text in the applicable countries shall be as follows: In **Denmark**: “Apparatets stikprop skal tilsluttes en stikkontakt med jord som giver forbindelse til stikproppens jord.” In **Finland**: "Laite on liitettävä suojakoskettimilla varustettuun pistorasiaan" In **Norway**: “Apparatet må tilkoples jordet stikkontakt” In **Sweden**: “Apparaten skall anslutas till jordat uttag”		N/A
4.7.3	**United Kingdom** To the end of the subclause the following is added: The torque test is performed using a socket-outlet complying with BS 1363, and the plug part shall be assessed to the relevant clauses of BS 1363. Also see Annex G.4.2 of this annex		N/A

IEC62368_1D - ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict
5.2.2.2	**Denmark** After the 2nd paragraph add the following: A warning (marking **safeguard**) for high **touch current** is required if the **touch current** exceeds the limits of 3,5 mA a.c. or 10 mA d.c.		N/A
5.4.11.1 and Annex G	**Finland and Sweden** To the end of the subclause the following is added: For separation of the telecommunication network from earth the following is applicable: If this insulation is solid, including insulation forming part of a component, it shall at least consist of either • two layers of thin sheet material, each of which shall pass the electric strength test below, or • one layer having a distance through insulation of at least 0,4 mm, which shall pass the electric strength test below. If this insulation forms part of a semiconductor component (e.g. an optocoupler), there is no distance through insulation requirement for the insulation consisting of an insulating compound completely filling the casing, so that clearances and creepage distances do not exist, if the component passes the electric strength test in accordance with the compliance clause below and in addition • passes the tests and inspection criteria of 5.4.8 with an electric strength test of 1,5 kV multiplied by 1,6 (the electric strength test of 5.4.9 shall be performed using 1,5 kV), and • is subject to routine testing for electric strength during manufacturing, using a test voltage of 1,5kV. It is permitted to bridge this insulation with a capacitor complying with EN 60384-14:2005, subclass Y2. A capacitor classified Y3 according to EN 60384-14:2005, may bridge this insulation under the following conditions: • the insulation requirements are satisfied by having a capacitor classified Y3 as defined by EN 60384-14, which in addition to the Y3 testing, is tested with an impulse test of 2,5 kV defined in 5.4.11; • the additional testing shall be performed on all the test specimens as described in EN 60384-14; the impulse test of 2,5 kV is to be performed before the endurance test in EN 60384-14, in the sequence of tests as described in EN 60384-14.		N/A
5.5.2.1	**Norway** After the 3rd paragraph the following is added: Due to the IT power system used, capacitors are required to be rated for the applicable line-to-line voltage (230 V).		P

IEC62368_1D - ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict
5.5.6	**Finland, Norway** and **Sweden** To the end of the subclause the following is added: Resistors used as **basic safeguard** or bridging **basic insulation** in **class I pluggable equipment type A** shall comply with G.10.1 and the test of G.10.2.		N/A
5.6.1	**Denmark** **Add** to the end of the subclause Due to many existing installations where the socket-outlets can be protected with fuses with higher rating than the rating of the socket-outlets the protection for pluggable equipment type A shall be an integral part of the equipment. *Justification:* In Denmark an existing 13 A socket outlet can be protected by a 20 A fuse.		N/A
5.6.4.2.1	**Ireland and United Kingdom** After the indent for **pluggable equipment type A**, the following is added: – the **protective current rating** is taken to be 13 A, this being the largest rating of fuse used in the **mains** plug.		N/A
5.6.5.1	To the second paragraph the following is added: The range of conductor sizes of flexible cords to be accepted by terminals for equipment with a rated current over 10 A and up to and including 13 A is: 1,25 mm^2 to 1,5 mm^2 in cross-sectional area.		N/A
5.7.5	**Denmark** To the end of the subclause the following is added: The installation instruction shall be affixed to the equipment if the **protective conductor current** exceeds the limits of 3,5 mA a.c. or 10 mA d.c.		N/A

IEC62368_1D - ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict
5.7.6.1	**Norway and Sweden** To the end of the subclause the following is added: The screen of the television distribution system is normally not earthed at the entrance of the building and there is normally no equipotential bonding system within the building. Therefore the protective earthing of the building installation needs to be isolated from the screen of a cable distribution system. It is however accepted to provide the insulation external to the equipment by an adapter or an interconnection cable with galvanic isolator, which may be provided by a retailer, for example. The user manual shall then have the following or similar information in Norwegian and Swedish language respectively, depending on in what country the equipment is intended to be used in: “Apparatus connected to the protective earthing of the building installation through the mains connection or through other apparatus with a connection to protective earthing – and to a television distribution system using coaxial cable, may in some circumstances create a fire hazard. Connection to a television distribution system therefore has to be provided through a device providing electrical isolation below a certain frequency range (galvanic isolator, see EN 60728-11)” NOTE In Norway, due to regulation for CATV-installations, and in Sweden, a galvanic isolator shall provide electrical insulation below 5 MHz. The insulation shall withstand a dielectric strength of 1,5 kV r.m.s., 50 Hz or 60 Hz, for 1 min. Translation to Norwegian (the Swedish text will also be accepted in Norway): “Apparater som er koplet til beskyttelsesjord via nettplugg og/eller via annet jordtilkoplet utstyr – og er tilkoplet et koaksialbasert kabel-TV nett, kan forårsake brannfare. For å unngå dette skal det ved tilkopling av apparater til kabel-TV nett installeres en galvanisk isolator mellom apparatet og kabel-TV nettet.” Translation to Swedish: ”Apparater som är kopplad till skyddsjord via jordat vägguttag och/eller via annan utrustning och samtidigt är kopplad till kabel-TV nät kan i vissa fall medföra risk för brand. För att undvika detta skall vid anslutning av apparaten till kabel-TV nät galvanisk isolator finnas mellan apparaten och kabel-TV nätet.”.		N/A

IEC62368_1D - ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict
5.7.6.2	**Denmark** To the end of the subclause the following is added: The warning (marking safeguard) for high touch current is required if the touch current or the protective current exceed the limits of 3,5 mA .		N/A
B.3.1 and B.4	**Ireland and United Kingdom** The following is applicable: To protect against excessive currents and short-circuits in the primary circuit of **direct plug-in equipment**, tests according to Annexes B.3.1 and B.4 shall be conducted using an external miniature circuit breaker complying with EN 60898-1, Type B, rated 32A. If the equipment does not pass these tests, suitable protective devices shall be included as an integral part of the **direct plug-in equipment**, until the requirements of Annexes B.3.1 and B.4 are met		N/A
G.4.2	**Denmark** To the end of the subclause the following is added: Supply cords of single phase appliances having a rated current not exceeding 13 A shall be provided with a plug according to DS 60884-2-D1:2011. CLASS I EQUIPMENT provided with socket-outlets with earth contacts or which are intended to be used in locations where protection against indirect contact is required according to the wiring rules shall be provided with a plug in accordance with standard sheet DK 2-1a or DK 2-5a. If a single-phase equipment having a RATED CURRENT exceeding 13 A or if a poly-phase equipment is provided with a supply cord with a plug, this plug shall be in accordance with the standard sheets DK 6-1a in DS 60884-2-D1 or EN 60309-2. Mains socket outlets intended for providing power to Class II apparatus with a rated current of 2,5 A shall be in accordance DS 60884-2-D1:2011 standard sheet DKA 1-4a. Other current rating socket outlets shall be in compliance with Standard Sheet DKA 1-3a or DKA 1-1c. Mains socket-outlets with earth shall be in compliance with DS 60884-2-D1:2011 Standard Sheet DK 1-3a, DK 1-1c, DK1-1d, DK 1-5a or DK 1-7a *Justification:* Heavy Current Regulations, Section 6c		N/A

IEC62368_1D - ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict
G.4.2	**United Kingdom** To the end of the subclause the following is added: The plug part of direct plug-in equipment shall be assessed to BS 1363: Part 1, 12.1, 12.2, 12.3, 12.9, 12.11, 12.12, 12.13, 12.16, and 12.17, except that the test of 12.17 is performed at not less than 125 °C. Where the metal earth pin is replaced by an Insulated Shutter Opening Device (ISOD), the requirements of clauses 22.2 and 23 also apply.		N/A
G.7.1	**United Kingdom** To the first paragraph the following is added: Equipment 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 shall be fitted with a 'standard plug' in accordance with the Plugs and Sockets etc (Safety) Regulations 1994, Statutory Instrument 1994 No. 1768, 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/A
G.7.1	**Ireland** To the first paragraph the following is added: Apparatus which is fitted with a flexible cable or cord shall be provided with a plug in accordance with Statutory Instrument 525: 1997, "13 A Plugs and Conversion Adapters for Domestic Use Regulations: 1997. S.I. 525 provides for the recognition of a standard of another Member State which is equivalent to the relevant Irish Standard		N/A
G.7.2	**Ireland and United Kingdom** To the first paragraph the following is added: A power supply cord with a conductor of 1,25 mm^2 is allowed for equipment which is rated over 10 A and up to and including 13 A.		N/A

IEC62368_1D - ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict
ZC	**ANNEX ZC, NATIONAL DEVIATIONS (EN)**		**N/A**
10.5.2	**Germany** The following requirement applies: For the operation of any cathode ray tube intended for the display of visual images operating at an acceleration voltage exceeding 40 kV, authorization is required, or application of type approval (Bauartzulassung) and marking. *Justification:* German ministerial decree against ionizing radiation (Röntgenverordnung), in force since 2002-07-01, implementing the European Directive 96/29/EURATOM. **NOTE** Contact address: Physikalisch-Technische Bundesanstalt, Bundesallee 100, D-38116 Braunschweig, Tel.: Int +49-531-592-6320, Internet: http://www.ptb.de		N/A

---End of Attachment 2---

Safety Instruction

These instructions are intended to ensure that user can use the product correctly to avoid danger or property loss.

The precaution measure is divided into Dangers and Cautions:

Dangers: Neglecting any of the warnings may cause serious injury or death.

Cautions: Neglecting any of the cautions may cause injury or equipment damage.

⚠	⚠
Dangers: Follow these safeguards to prevent serious injury or death.	**Cautions:** Follow these precautions to prevent potential injury or material damage.

⚠ Danger:

- In the use of the product, you must be in strict compliance with the electrical safety regulations of the nation and region.
- Do not touch the bare metal contacts of the inlets after the circuit breaker is turned off. Electricity still exists.
- This equipment is not suitable for use in locations where children are likely to be present.
- All the electronic operation should be strictly compliance with the electrical safety regulations, fire prevention regulations and other related regulations in your local region.
- Please use the power adapter, which is provided by normal company. The power consumption cannot be less than the required value.
- Do not connect several devices to one power adapter as adapter overload may cause over-heat or fire hazard.
- Please make sure that the power has been disconnected before you wire, install or dismantle the device.
  If the top caps should be open and the device should be powered on for maintenance, make sure:
  1. Power off the fan to prevent the operator from getting injured accidentally.
  2. Do not touch bare high-voltage components.
  3. Make sure the switch's wiring sequence is correct after maintenance.
- When the product is installed on wall or ceiling, the device shall be firmly fixed.
- If smoke, odors or noise rise from the device, turn off the power at once and unplug the power cable, and then please contact the service center.
- Risk of explosion if the battery is replaced by an incorrect type.
  Improper replacement of the battery with an incorrect type may defeat a safeguard (for example, in the case of some lithium battery types).
  Do not dispose of the battery into fire or a hot oven, or mechanically crush or cut the battery, which may result in an explosion.

  Do not leave the battery in an extremely high temperature surrounding environment, which may result in an explosion or the leakage of flammable liquid or gas.
  Do not subject the battery to extremely low air pressure, which may result in an explosion or the leakage of flammable liquid or gas.
  Dispose of used batteries according to the instructions.
- If the product does not work properly, please contact your dealer or the nearest service center. Never attempt to disassemble the device yourself. (We shall not assume any responsibility for problems caused by unauthorized repair or maintenance.)

⚠ Cautions:

- The equipment shall not be exposed to dripping or splashing and that no objects filled with liquids, such as vases, shall be placed on the equipment.
- Ensure correct wiring of the terminals for connection to an AC mains supply.
- The equipment has been designed, when required, modified for connection to an IT power distribution system.
- No naked flame sources, such as lighted candles, should be placed on the equipment.
- The serial port of the equipment is used for debugging only.
- Stainless steel may be corroded in some circumstances. You need to clean and care the device by using the stainless steel cleaner. It is suggested to clean the device every month.
- Do not drop the device or subject it to physical shock, and do not expose it to high electromagnetism radiation. Avoid the equipment installation on vibrations surface or places subject to shock (ignorance can cause equipment damage).
- Do not place the device in extremely hot (refer to the specification of the device for the detailed operating temperature), cold, dusty or damp locations, and do not expose it to high electromagnetic radiation.
- The device cover for indoor use shall be kept from rain and moisture.
- Exposing the equipment to direct sun light, low ventilation or heat source such as heater or radiator is forbidden (ignorance can cause fire danger).
- Do not aim the device at the sun or extra bright places. A blooming or smear may occur otherwise (which is not a malfunction however), and affecting the endurance of sensor at the same time.
- Please use the provided glove when open up the device cover, avoid direct contact with the device cover, because the acidic sweat of the fingers may erode the surface coating of the device cover.
- Please use a soft and dry cloth when clean inside and outside surfaces of the device cover, do not use alkaline detergents.
- Please keep all wrappers after unpack them for future use. In case of any failure occurred, you need to return the device to the factory with the original wrapper. Transportation without the original wrapper may result in damage on the device and lead to additional costs.
- Improper use or replacement of the battery may result in hazard of explosion. Replace with the same or equivalent type only. Dispose of used batteries according to the instructions provided by the battery manufacturer.

- Biometric recognition products are not completely applicable to anti-spoofing environments. If you require a higher security level, use multiple authentication modes.
- Do not stay in the lane when the device is rebooting.
- RISK OF EXPLOSION IF BATTERY IS REPLACED BY AN INCORRECT TYPE. DISPOSE OF USED BATTERIES ACCORDING TO THE INSTRUCTIONS.
- SUITABLE FOR MOUNTING ON CONCRETE OR OTHER NON-COMBUSTIBLE SURFACE ONLY.
- The instructions shall require connection of the equipment protective earthing conductor to the installation protective earthing conductor.

*******End of attachment 3*******