Test Report issued under the responsibility of:

TEST REPORT
IEC 60950-1
Information technology equipment – Safety – Part 1: General requirements

Report Number. ..... :	SHES200601115801
Date of issue ..... :	2020-08-05
Total number of pages ..... :	46
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 60950-1:2005, AMD1:2009, AMD2:2013
Test procedure ..... :	CB Scheme
Non-standard test method ..... :	N/A
Test Report Form No. ..... :	IEC60950_1G
Test Report Form(s) Originator .... :	SGS Fimko Ltd
Master TRF ..... :	Dated 2019-07-02

If this Test Report Form is used by non-IECEE members, the IECEE/IEC logo and the reference to the CB Scheme procedure shall be removed.

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.
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Test item description..... :	HD Traffic Unit
Trade Mark..... :	HIKVISION
Manufacturer..... :	Same as applicant
Model/Type reference..... :	See page 7
Ratings..... :	100-240 Vac; 50/60 Hz; 0.9 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).....:		Ade Wu	
Approved by (name, function, signature)...:		Michael Xu	
☐	**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 + 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 – 36 pages of Photos documents;
Attachment 2 – 19 pages of European group differences and national differences;
Attachment 3 – 4 pages of Safety information.

Summary of testing:

The sample(s) tested complies with the requirements of IEC 60950-1:2005 (2nd Edition) + Am 1:2009 + Am 2:2013 and EN 60950-1:2006 + A11:2009 + A1:2010 + A12:2011 + A2:2013.

When determining the test conclusion, the Measurement Uncertainty of test has been considered.

K-type thermocouple used for temperature measurement.

Tests performed (name of test and test clause):	**Testing location:**
☒ 1. GENERAL ☒ 2. PROTECTION FROM HAZARDS ☒ 3. WIRING, CONNECTIONS AND SUPPLY ☒ 4. PHYSICAL REQUIREMENTS ☒ 5. ELECTRICAL REQUIREMENTS AND SIMULATED ABNORMAL CONDITIONS ☐ 6. CONNECTION TO TELECOMMUNICATION NETWORKS ☐ 7. CONNECTION TO CABLE DISTRIBUTION SYSTEMS	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):

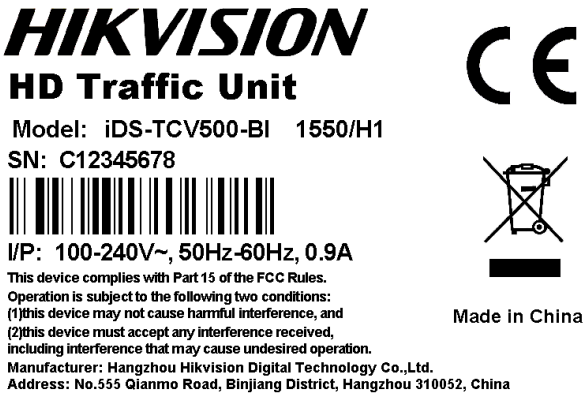
1. EU Group Differences (EN 60950-1:2006 + A11:2009 + A1:2010 + A12:2011 + A2:2013)
2. EU Special National Conditions, EU A-deviations: none

The product fulfils the above requirements.

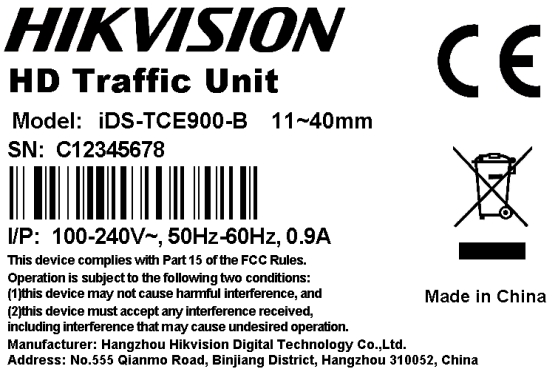
Copy of marking plate:

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

Marking plate for model iDS-TCV500-BI



Marking plate for model iDS-TCE900-B



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 model name.

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 place on the market. The contact details shall be in a language easily understood by end-users and market surveillance authorities.

Test item particulars .....:	
Equipment mobility.....:	[] movable [] hand-held [] transportable [x] stationary [] for building-in [] direct plug-in
Connection to the mains.....:	[x] pluggable equipment [x] type A [] type B [] permanent connection [] detachable power supply cord [] non-detachable power supply cord [] not directly connected to the mains
Operating condition.....:	[x] continuous [] rated operating / resting time:
Access location .....:	[x] operator accessible [] restricted access location
Over voltage category (OVC) .....:	[] OVC I [x] OVC II [] OVC III [] OVC IV [] other:
Mains supply tolerance (%) or absolute mains supply values .....:	±10%
Tested for IT power systems .....:	[] Yes [x] No
IT testing, phase-phase voltage (V) .....:	N/A
Class of equipment .....:	[x] Class I [] Class II [] Class III [] Not classified
Considered current rating of protective device as part of the building installation (A) .....:	20A
Pollution degree (PD) .....:	[] PD 1 [x] PD 2 [] PD 3
IP protection class .....:	IPX0
Altitude during operation (m) .....:	≤ 2000 m
Altitude of test laboratory (m) .....:	≤ 2000 m
Mass of equipment (kg) .....:	4.5 kg for model iDS-TCV500-BI 5,75 kg for model iDS-TCE900-B

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..... :	2020-06-22
Date (s) of performance of tests ..... :	2020-07-03 to 2020-07-10

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.

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 1 month 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**

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.

General product information:

Functions	The equipment under test is a Class I HD Traffic Unit. The equipment contains a pre-certified internal power supply.
Material of enclosure	Metal & Glass
Model difference	All models are identical except for model name, appearance colour and silkscreen which are not effect for safety.
Other features	Indoor use only.

Model list:

iDS-TCV300-A6E	iDS-TCV300-A6I	iDS-TCV300-B6I	iDS-TCV300-B6E
iDS-TCV300-C6I	iDS-TCV300-C6E	iDS-TCV300-CEM	iDS-TCV300-AEM
iDS-TCV900-AE	iDS-TCV900-AI	iDS-TCV900-BI	iDS-TCV900-BE
iDS-TCV900-CI	iDS-TCV900-CE	iDS-TCV900-CEM	iDS-TCE300-A6
iDS-TCE300-A6I	iDS-TCE300-A6E	iDS-TCE300-B6I	iDS-TCE300-B6E
iDS-TCE300-B6	iDS-TCE300-C6I	iDS-TCE300-C6E	iDS-TCE300-C6
iDS-TCE300-CEM	iDS-TCE300-CM	iDS-TCE300-AEM	iDS-TCE300-AM
iDS-TCE900-A	iDS-TCE900-AI	iDS-TCE900-AE	iDS-TCE900-BI
iDS-TCE900-BE	iDS-TCE900-B	iDS-TCE900-CI	iDS-TCE900-CE
iDS-TCE900-C	iDS-TCE900-CM	iDS-TCE900-CEM	iDS-TCV500-BE
iDS-TCV500-BI	iDS-TCE500-B	iDS-TCV500-CE	iDS-TCV500-CI
iDS-TCE500-C	iDS-TCV500-BX	iDS-TCV500-CX	iDS-TCV900-BX
iDS-TCV900-CX	iDS-TCM800-B	iDS-TCM800-C	iDS-TCM800-BI
iDS-TCM800-CI	iDS-TCM400-B	iDS-TCM400-C	iDS-TCM400-BI
iDS-TCM400-CI	iDS-TCS800-C	iDS-TCS800-CI	iDS-TCS800-B
iDS-TCS800-BI	iDS-TCS400-C	iDS-TCS400-CI	iDS-TCS400-B
iDS-TCS400-BI	iDS-TCV500-CEM	iDS-TCV500-CEFM	iDS-TCV500-BEF
iDS-TCV500-BIF	iDS-TCV500-CEL	iDS-TCV500-CEFL	iDS-TCE500-CL
iDS-TCE500-CIL	-	-	-

Tma = 60°C
Unless otherwise stated, tests are performed on model iDS-TCV500-BI and iDS-TCE900-B as representative for worst condition.

Abbreviations used in the report:

- normal conditions	**N.C.**	- single fault conditions	**S.F.C**
- functional insulation	**OP**	- basic insulation	**BI**
- double insulation	**DI**	- supplementary insulation	**SI**
- between parts of opposite polarity	**BOP**	- reinforced insulation	**RI**

Indicate used abbreviations (if any)

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

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

1.6	**Power interface**		P
1.6.1	AC power distribution systems	TN, TT	P
1.6.2	Input current	(see appended table 1.6.2)	P
1.6.3	Voltage limit of hand-held equipment	Not hand-held equipment.	N/A
1.6.4	Neutral conductor	Neutral is insulated from earth with basic insulation through the equipment. Components connected between neutral and earth are rated and certified for a working voltage 250V.	P

1.7	**Marking and instructions**		P
1.7.1	Power rating and identification markings	See below	P
1.7.1.1	Power rating marking		P
	Multiple mains supply connections.....:	Single mains supply	N/A
	Rated voltage(s) or voltage range(s) (V) .....:	See copy of marking plate.	P
	Symbol for nature of supply, for d.c. only.....:	AC mains powered.	N/A
	Rated frequency or rated frequency range (Hz) ...:	See copy of marking plate.	P
	Rated current (mA or A) .....:	See copy of marking plate.	P
1.7.1.2	Identification markings		P
	Manufacturer's name or trade-mark or identification mark .....:	See copy of marking plate.	P
	Model identification or type reference .....:	See copy of marking plate.	P
	Symbol for Class II equipment only .....:	Class I equipment.	N/A
	Other markings and symbols .....:	The additional marking does not give rise to misunderstandings.	P
1.7.1.3	Use of graphical symbols		P
1.7.2	Safety instructions and marking		P
1.7.2.1	General	The user's manual contains information for operation, installation, servicing, transport, storage and technical data. The operation guide is provided to the user.	P
1.7.2.2	Disconnect devices	Power plug is considered as disconnect devices	N/A
1.7.2.3	Overcurrent protective device	Pluggable equipment type A	N/A
1.7.2.4	IT power distribution systems		N/A

IEC 60950-1			
Clause	Requirement + Test	Result - Remark	Verdict
1.7.2.5	Operator access with a tool		N/A
1.7.2.6	Ozone	The equipment does not produce ozone.	N/A
1.7.3	Short duty cycles	Continuous operation	N/A
1.7.4	Supply voltage adjustment .....:	No voltage selector.	N/A
	Methods and means of adjustment; reference to installation instructions .....:		N/A
1.7.5	Power outlets on the equipment .....:	No such part.	N/A
1.7.6	Fuse identification (marking, special fusing characteristics, cross-reference) .....:	Certified power supply.	P
1.7.7	Wiring terminals		P
1.7.7.1	Protective earthing and bonding terminals .....:	Appliance inlet used.	P
1.7.7.2	Terminals for a.c. mains supply conductors	The equipment is not permanently connected or provided with a non-detachable power supply cord.	N/A
1.7.7.3	Terminals for d.c. mains supply conductors		N/A
1.7.8	Controls and indicators		P
1.7.8.1	Identification, location and marking .....:	The function of controls affecting safety is obvious without knowledge of language etc.	P
1.7.8.2	Colours .....:	Safety is not involved	N/A
1.7.8.3	Symbols according to IEC 60417.....:		N/A
1.7.8.4	Markings using figures .....:	No such marking.	N/A
1.7.9	Isolation of multiple power sources .....:	Single mains supply.	N/A
1.7.10	Thermostats and other regulating devices .....:	No such part.	N/A
1.7.11	Durability	The label was subject to the permanence of marking test. The label was rubbed with cloth soaked with water for 15 sec. And then again for 15 sec. with the cloth soaked with petroleum spirit. After this test there was no damage to the label. The marking on the label did not fade. There was no curling and lifting of the label edge.	P
1.7.12	Removable parts	No removable parts.	N/A

IEC 60950-1			
Clause	Requirement + Test	Result - Remark	Verdict
1.7.13	Replaceable batteries ..... :	RTC Coin battery on PCB.	P
	Language(s) ..... :	English	—
1.7.14	Equipment for restricted access locations..... :	Not for restricted access location.	N/A
2	**PROTECTION FROM HAZARDS**		P
2.1	**Protection from electric shock and energy hazards**		P
2.1.1	Protection in operator access areas		P
2.1.1.1	Access to energized parts	There is adequate protection against operator contact with bare parts at ELV or hazardous voltage or parts separated from these with basic or functional insulation only. No hazardous voltages exceeding 1000V a.c. or 1500V d.c.	P
	Test by inspection ..... :	No access to hazardous part.	P
	Test with test finger (Figure 2A) ..... :	Tested enclosure.	P
	Test with test pin (Figure 2B) ..... :	Tested enclosure.	P
	Test with test probe (Figure 2C) ..... :	No TNV circuit.	N/A
2.1.1.2	Battery compartments		N/A
2.1.1.3	Access to ELV wiring	No internal wiring at ELV.	N/A
	Working voltage (Vpeak or Vrms); minimum distance through insulation (mm)		—
2.1.1.4	Access to hazardous voltage circuit wiring	All accessible parts are separated from internal wiring at hazardous voltage by double or reinforced insulation or basic insulation with protective earth/ bonding.	P
2.1.1.5	Energy hazards ..... :	No energy hazard in operator access area. Checked by means of the test finger.	P
2.1.1.6	Manual controls	No such control.	N/A
2.1.1.7	Discharge of capacitors in equipment	Certified power supply.	P
	Measured voltage (V); time-constant (s)..... :		—
2.1.1.8	Energy hazards – d.c. mains supply		N/A
	a) Capacitor connected to the d.c. mains supply .. :		N/A
	b) Internal battery connected to the d.c. mains supply :		N/A
2.1.1.9	Audio amplifiers ..... :		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
2.1.2	Protection in service access areas	Checked by inspection, unintentional contact is unlikely during service operations.	P
2.1.3	Protection in restricted access locations		N/A
2.2	**SELV circuits**		P
2.2.1	General requirements	Certified power supply. SELV limits are not exceeded under normal condition and after a single fault.	P
2.2.2	Voltages under normal conditions (V) .....:	Within SELV limits.	P
2.2.3	Voltages under fault conditions (V) .....:	Within SELV limits.	P
2.2.4	Connection of SELV circuits to other circuits ..... :	SELV circuits are only connected to other SELV circuits.	P
2.3	**TNV circuits**		N/A
2.3.1	Limits	No TNV circuit.	N/A
	Type of TNV circuits.....:		—
2.3.2	Separation from other circuits and from accessible parts		N/A
2.3.2.1	General requirements		N/A
2.3.2.2	Protection by basic insulation		N/A
2.3.2.3	Protection by earthing		N/A
2.3.2.4	Protection by other constructions .....:		N/A
2.3.3	Separation from hazardous voltages		N/A
	Insulation employed .....:		—
2.3.4	Connection of TNV circuits to other circuits		N/A
	Insulation employed .....:		—
2.3.5	Test for operating voltages generated externally		N/A
2.4	**Limited current circuits**		P
2.4.1	General requirements	Certified power supply.	P
2.4.2	Limit values		P
	Frequency (Hz).....:		—
	Measured current (mA) .....:		—
	Measured voltage (V).....:		—
	Measured circuit capacitance (nF or µF).....:		—

IEC 60950-1			
Clause	Requirement + Test	Result - Remark	Verdict
2.4.3	Connection of limited current circuits to other circuits		P
2.5	**Limited power sources**		N/A
	a) Inherently limited output		N/A
	b) Impedance limited output		N/A
	c) Regulating network or IC current limiter, limits output under normal operating and single fault condition		N/A
	Use of integrated circuit (IC) current limiters		N/A
	d) Overcurrent protective device limited output		N/A
	Max. output voltage (V), max. output current (A), max. apparent power (VA)..... :	See appended table 2.5.	—
	Current rating of overcurrent protective device (A) .:		—
2.6	**Provisions for earthing and bonding**		P
2.6.1	Protective earthing	Accessible conductive parts are reliably connected to protective earth. The equipment provided with earthing terminal with appliance inlet.	P
2.6.2	Functional earthing		N/A
	Use of symbol for functional earthing .....:		N/A
2.6.3	Protective earthing and protective bonding conductors		P
2.6.3.1	General		P
2.6.3.2	Size of protective earthing conductors	Power supply cord is not provided with the equipment.	N/A
	Rated current (A), cross-sectional area (mm^2), AWG..... :		—
2.6.3.3	Size of protective bonding conductors	Refer to 2.6.3.4.	P
	Rated current (A), cross-sectional area (mm^2), AWG..... :		—
	Protective current rating (A), cross-sectional area (mm^2), AWG ..... :		

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Clause	Requirement + Test	Result - Remark	Verdict
2.6.3.4	Resistance of earthing conductors and their terminations; resistance (Ω), voltage drop (V), test current (A), duration (min) ..... :	Certified power supply. From the appliance inlet to the metal chassis: For model iDS-TCE900-B U = 0.512V ⇒ 16mΩ at 32A for 2 minutes. U = 0.76V ⇒ 19mΩ at 40A for 2 minutes. For model iDS-TCV500-BI U = 1.056V ⇒ 33mΩ at 32A for 2 minutes. U = 0.92V ⇒ 23mΩ at 40A for 2 minutes.	P
2.6.3.5	Colour of insulation ..... :	Certified power supply.	P
2.6.4	Terminals		P
2.6.4.1	General		P
2.6.4.2	Protective earthing and bonding terminals	The equipment is provided with an appliance inlet.	P
	Rated current (A), type, nominal thread diameter (mm) ..... :		—
2.6.4.3	Separation of the protective earthing conductor from protective bonding conductors		P
2.6.5	Integrity of protective earthing		P
2.6.5.1	Interconnection of equipment	No interconnection of equipment.	N/A
2.6.5.2	Components in protective earthing conductors and protective bonding conductors	No switch or overcurrent protective devices in the protective earthing/bonding conductors.	P
2.6.5.3	Disconnection of protective earth	It is impossible to disconnect protective earth without disconnecting mains. Appliance coupler used as the disconnect device.	P
2.6.5.4	Parts that can be removed by an operator	No operator removable parts with protective earth connection except power supply cord.	P
2.6.5.5	Parts removed during servicing	Appliance coupler used as the disconnect device. Protective earthed parts cannot be removed in a way which compares safety.	P
2.6.5.6	Corrosion resistance	No risk of corrosion.	P

IEC 60950-1			
Clause	Requirement + Test	Result - Remark	Verdict
2.6.5.7	Screws for protective bonding	Adequate connection of protective bonding.	P
2.6.5.8	Reliance on telecommunication network or cable distribution system	No TNV circuit.	N/A
2.7	**Overcurrent and earth fault protection in primary circuits**		P
2.7.1	Basic requirements	Protective device is integrated in the equipment.	P
	Instructions when protection relies on building installation		N/A
2.7.2	Faults not simulated in 5.3.7	Considered.	P
2.7.3	Short-circuit backup protection	Adequate protective device.	P
2.7.4	Number and location of protective devices .....:	one protective device in line conductor	P
2.7.5	Protection by several devices	one protective device in line conductor	N/A
2.7.6	Warning to service personnel .....:		N/A
2.8	**Safety interlocks**		N/A
2.8.1	General principles	No safety interlocks.	N/A
2.8.2	Protection requirements		N/A
2.8.3	Inadvertent reactivation		N/A
2.8.4	Fail-safe operation		N/A
	Protection against extreme hazard		N/A
2.8.5	Moving parts		N/A
2.8.6	Overriding		N/A
2.8.7	Switches, relays and their related circuits		N/A
2.8.7.1	Separation distances for contact gaps and their related circuits (mm) .....:		N/A
2.8.7.2	Overload test		N/A
2.8.7.3	Endurance test		N/A
2.8.7.4	Electric strength test	(see appended table 5.2)	N/A
2.8.8	Mechanical actuators		N/A
2.9	**Electrical insulation**		P

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Clause	Requirement + Test	Result - Remark	Verdict
2.9.1	Properties of insulating materials	Neither natural rubber, materials containing asbestos nor hygroscopic materials are used as insulation. No driving belts or couplings used.	P
2.9.2	Humidity conditioning	Humidity treatment performed for 120 h.	P
	Relative humidity (%), temperature (°C) .....:	93%, 40°C	—
2.9.3	Grade of insulation	Insulation is considered to be functional, basic, supplementary, reinforced or double insulation.	P
2.9.4	Separation from hazardous voltages		P
	Method(s) used .....:	Method 1 is used.	—

2.10	**Clearances, creepage distances and distances through insulation**		P
2.10.1	General		P
2.10.1.1	Frequency .....:	Considered.	P
2.10.1.2	Pollution degrees .....:	PD 2	P
2.10.1.3	Reduced values for functional insulation	Refer to Cl. 5.3.4.	P
2.10.1.4	Intervening unconnected conductive parts	Considered.	P
2.10.1.5	Insulation with varying dimensions	No such insulation.	N/A
2.10.1.6	Special separation requirements	Not used.	N/A
2.10.1.7	Insulation in circuits generating starting pulses	No insulation in circuit generating starting pluses.	N/A
2.10.2	Determination of working voltage	Power supply separately certified.	P
2.10.2.1	General		P
2.10.2.2	RMS working voltage		P
2.10.2.3	Peak working voltage		P
2.10.3	Clearances	Power supply separately certified.	P
2.10.3.1	General		P
2.10.3.2	Mains transient voltages		P
	a) AC mains supply .....:	2500V	P
	b) Earthed d.c. mains supplies .....:		N/A
	c) Unearthed d.c. mains supplies .....:		N/A
	d) Battery operation .....:		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
2.10.3.3	Clearances in primary circuits	Power supply separately certified.	P
2.10.3.4	Clearances in secondary circuits		N/A
2.10.3.5	Clearances in circuits having starting pulses		N/A
2.10.3.6	Transients from a.c. mains supply .....:		N/A
2.10.3.7	Transients from d.c. mains supply .....:		N/A
2.10.3.8	Transients from telecommunication networks and cable distribution systems .....:		N/A
2.10.3.9	Measurement of transient voltage levels		N/A
	a) Transients from a mains supply		N/A
	For an a.c. mains supply .....:		N/A
	For a d.c. mains supply .....:		N/A
	b) Transients from a telecommunication network :		N/A
2.10.4	Creepage distances	Power supply separately certified.	P
2.10.4.1	General		P
2.10.4.2	Material group and comparative tracking index		P
	CTI tests .....:	Material group IIIb is assumed to be used	—
2.10.4.3	Minimum creepage distances	Power supply separately certified.	P
2.10.5	Solid insulation	Power supply separately certified.	P
2.10.5.1	General		P
2.10.5.2	Distances through insulation	Power supply separately certified.	P
2.10.5.3	Insulating compound as solid insulation		P
2.10.5.4	Semiconductor devices		P
2.10.5.5.	Cemented joints		N/A
2.10.5.6	Thin sheet material – General	Power supply separately certified.	P
2.10.5.7	Separable thin sheet material		P
	Number of layers (pcs).....:		—
2.10.5.8	Non-separable thin sheet material		N/A
2.10.5.9	Thin sheet material – standard test procedure		N/A
	Electric strength test		—
2.10.5.10	Thin sheet material – alternative test procedure	Power supply separately certified.	P

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Clause	Requirement + Test	Result - Remark	Verdict
	Electric strength test		—
2.10.5.11	Insulation in wound components	Power supply separately certified.	P
2.10.5.12	Wire in wound components	Power supply separately certified.	P
	Working voltage .....:		P
	a) Basic insulation not under stress .....:		N/A
	b) Basic, supplementary, reinforced insulation .....:		P
	c) Compliance with Annex U .....:		P
	Two wires in contact inside wound component; angle between 45° and 90° .....:		P
2.10.5.13	Wire with solvent-based enamel in wound components		N/A
	Electric strength test	(see appended table 2.10.5)	—
	Routine test		N/A
2.10.5.14	Additional insulation in wound components		P
	Working voltage .....:		P
	- Basic insulation not under stress .....:		N/A
	- Supplementary, reinforced insulation .....:		P
2.10.6	Construction of printed boards		P
2.10.6.1	Uncoated printed boards		P
2.10.6.2	Coated printed boards		N/A
2.10.6.3	Insulation between conductors on the same inner surface of a printed board		N/A
2.10.6.4	Insulation between conductors on different layers of a printed board		N/A
	Distance through insulation	(see appended table 2.10.5)	N/A
	Number of insulation layers (pcs) .....:		N/A
2.10.7	Component external terminations	Coatings not used over terminations to increase effective creepage and clearance distances.	N/A
2.10.8	Tests on coated printed boards and coated components		N/A
2.10.8.1	Sample preparation and preliminary inspection		N/A
2.10.8.2	Thermal conditioning		N/A
2.10.8.3	Electric strength test	(see appended table 5.2)	N/A
2.10.8.4	Abrasion resistance test		N/A
2.10.9	Thermal cycling		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
2.10.10	Test for Pollution Degree 1 environment and insulating compound		N/A
2.10.11	Tests for semiconductor devices and cemented joints		N/A
2.10.12	Enclosed and sealed parts		N/A
3	**WIRING, CONNECTIONS AND SUPPLY**		P
3.1	**General**		P
3.1.1	Current rating and overcurrent protection	Adequate cross sectional areas on internal wiring and interconnecting cables.	P
3.1.2	Protection against mechanical damage	Wireways are smooth and free from edges. Wires are adequately fixed to prevent excessive strain on wire and terminals and avoiding damage to the insulation of the conductors.	P
3.1.3	Securing of internal wiring	Internal wiring is secured against excessive strain, loosening of terminals and damage to the conductor insulation.	P
3.1.4	Insulation of conductors	Insulation on internal conductors is considered to be of adequate quality and suitable for the application and the working voltage involved.	P
3.1.5	Beads and ceramic insulators	No beads or similar ceramic insulators on conductors.	N/A
3.1.6	Screws for electrical contact pressure	Electrical screw connection is only connecting protective earth to chassis. Metal screw engages more than 2 threads. Screws made of insulating material are not used where electrical connections, including protective earthing, are involved.	P
3.1.7	Insulating materials in electrical connections	No contact pressure through insulating material.	P
3.1.8	Self-tapping and spaced thread screws	Thread-cutting or space thread screws are not used for electrical connections.	N/A

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Clause	Requirement + Test	Result - Remark	Verdict
3.1.9	Termination of conductors	Terminations cannot become displaced so that clearances and creepage distances can be reduced.	P
	10 N pull test	Considered.	P
3.1.10	Sleeving on wiring	Heat shrinkable sleeving that tightens against the wire insulation.	P
3.2	**Connection to a mains supply**		P
3.2.1	Means of connection		P
3.2.1.1	Connection to an a.c. mains supply	The equipment is provided with an appliance inlet.	P
3.2.1.2	Connection to a d.c. mains supply	The equipment is not for connection to a d.c. mains supply.	N/A
3.2.2	Multiple supply connections	Only one supply connection.	N/A
3.2.3	Permanently connected equipment		N/A
	Number of conductors, diameter of cable and conduits (mm) .....:		—
3.2.4	Appliance inlets		P
3.2.5	Power supply cords		N/A
3.2.5.1	AC power supply cords		N/A
	Type .....:		—
	Rated current (A), cross-sectional area (mm^2), AWG .....:		—
3.2.5.2	DC power supply cords		N/A
3.2.6	Cord anchorages and strain relief		P
	Mass of equipment (kg), pull (N) .....:	4,5kg, 100N	—
	Longitudinal displacement (mm) .....:		—
3.2.7	Protection against mechanical damage	The equipment provided with an appliance inlet and smooth external surface does not damage power cord.	P
3.2.8	Cord guards		N/A
	Diameter or minor dimension D (mm); test mass (g) .....:		—
	Radius of curvature of cord (mm) .....:		—
3.2.9	Supply wiring space		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
3.3	**Wiring terminals for connection of external conductors**		N/A
3.3.1	Wiring terminals	Equipment provided with an appliance inlet.	N/A
3.3.2	Connection of non-detachable power supply cords		N/A
3.3.3	Screw terminals		N/A
3.3.4	Conductor sizes to be connected		N/A
	Rated current (A), cord/cable type, cross-sectional area (mm^2).....:		—
3.3.5	Wiring terminal sizes		N/A
	Rated current (A), type, nominal thread diameter (mm) .....:		—
3.3.6	Wiring terminal design		N/A
3.3.7	Grouping of wiring terminals		N/A
3.3.8	Stranded wire		N/A
3.4	**Disconnection from the mains supply**		P
3.4.1	General requirement		P
3.4.2	Disconnect devices	The power plug is regarded as disconnect device.	P
3.4.3	Permanently connected equipment	Not permanently connected equipment.	N/A
3.4.4	Parts which remain energized	No parts remain energized after the disconnect device is switched off.	N/A
3.4.5	Switches in flexible cords	No switch in flexible cord.	P
3.4.6	Number of poles - single-phase and d.c. equipment	The disconnect device disconnects both poles simultaneously.	P
3.4.7	Number of poles - three-phase equipment		N/A
3.4.8	Switches as disconnect devices		N/A
3.4.9	Plugs as disconnect devices		P
3.4.10	Interconnected equipment	No interconnections using hazardous voltages.	N/A
3.4.11	Multiple power sources		N/A
3.5	**Interconnection of equipment**		P
3.5.1	General requirements		P
3.5.2	Types of interconnection circuits .....:	SELV circuits.	P
3.5.3	ELV circuits as interconnection circuits	No ELV interconnections.	N/A

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Clause	Requirement + Test	Result - Remark	Verdict
3.5.4	Data ports for additional equipment	Signal data ports only.	P
4	**PHYSICAL REQUIREMENTS**		P
4.1	**Stability**		N/A
	Angle of 10°	<7kg	N/A
	Test force (N) ..... :	The unit is not floor-standing.	N/A
4.2	**Mechanical strength**		P
4.2.1	General		P
	Rack-mounted equipment.	Not Rack-mounted equipment.	N/A
4.2.2	Steady force test, 10 N	No hazard.	P
4.2.3	Steady force test, 30 N	No internal enclosure.	N/A
4.2.4	Steady force test, 250 N	No hazard. The test is performed at all of enclosure.	P
4.2.5	Impact test	No hazard.	P
	Fall test		P
	Swing test		P
4.2.6	Drop test; height (mm) ..... :		N/A
4.2.7	Stress relief test		N/A
4.2.8	Cathode ray tubes		N/A
	Picture tube separately certified ..... :		N/A
4.2.9	High pressure lamps		N/A
4.2.10	Wall or ceiling mounted equipment; force (N) ..... :	133N for iDS-TCV500-BI 170N for iDS-TCE900-B	P
4.3	**Design and construction**		P
4.3.1	Edges and corners	All edges and corners are rounded and smoothed.	P
4.3.2	Handles and manual controls; force (N)..... :	No such part.	N/A
4.3.3	Adjustable controls	No such part.	N/A
4.3.4	Securing of parts	No loosening of parts impairing creepage distances or clearances is likely to occur.	P
4.3.5	Connection by plugs and sockets	SELV connectors do not comply with IEC 60320 or IEC 60083.	P
4.3.6	Direct plug-in equipment	Not such equipment.	N/A

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Clause	Requirement + Test	Result - Remark	Verdict
	Torque .....:		—
	Compliance with the relevant mains plug standard .....:		N/A
4.3.7	Heating elements in earthed equipment		N/A
4.3.8	Batteries	(see appended tables 4.3.8)	P
	- Overcharging of a rechargeable battery		P
	- Unintentional charging of a non-rechargeable battery		P
	- Reverse charging of a rechargeable battery		N/A
	- Excessive discharging rate for any battery		P
4.3.9	Oil and grease	Insulation is not exposed to oil, grease etc.	N/A
4.3.10	Dust, powders, liquids and gases	Equipment does not produce dust or using powder, liquid or gas.	N/A
4.3.11	Containers for liquids or gases	No containers for liquids or gases in the equipment.	N/A
4.3.12	Flammable liquids .....:	The equipment does not contain flammable liquid.	N/A
	Quantity of liquid (l) .....:		N/A
	Flash point (°C) .....:		N/A
4.3.13	Radiation	See below	P
4.3.13.1	General		P
4.3.13.2	Ionizing radiation	No ionizing radiation.	N/A
	Measured radiation (pA/kg) .....:		—
	Measured high-voltage (kV) .....:		—
	Measured focus voltage (kV) .....:		—
	CRT markings .....:		—
4.3.13.3	Effect of ultraviolet (UV) radiation on materials	No UV radiation.	N/A
	Part, property, retention after test, flammability classification .....:		N/A
4.3.13.4	Human exposure to ultraviolet (UV) radiation .....:		N/A
4.3.13.5	Lasers (including laser diodes) and LEDs	See below	P
4.3.13.5.1	Lasers (including laser diodes)	No laser.	N/A
	Laser class .....:		—
4.3.13.5.2	Light emitting diodes (LEDs)	Exempt group.	P
4.3.13.6	Other types .....:		N/A

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Clause	Requirement + Test	Result - Remark	Verdict

4.4	**Protection against hazardous moving parts**		P
4.4.1	General	No hazardous moving part.	N/A
4.4.2	Protection in operator access areas .....:		N/A
	Household and home/office document/media shredders	(see Annex EE)	N/A
4.4.3	Protection in restricted access locations .....:		N/A
4.4.4	Protection in service access areas		N/A
4.4.5	Protection against moving fan blades		P
4.4.5.1	General	See below	P
	Not considered to cause pain or injury. a)……:	The DC Fan is within the limits under normal and fault conditions. DC Fan EF50151B1-C02C-A99 in system: $K=6x10^{-7}(0,0276 \times 20,0^2 \times 5500^2) = 200,376$ 5500/15000+200,376/2400 =0,367+0,083 =0,450<1; DC Fan RBH5015B in system: $K=6x10^{-7}(0,035 \times 20,0^2 \times 5500^2) = 254,1$ 5500/15000+254,1/2400 =0,367+0,106 =0,473<1	P
	Is considered to cause pain, not injury. b) ……..:		N/A
	Considered to cause injury. c) ……:		N/A
4.4.5.2	Protection for users	No fan in operator access area.	N/A
	Use of symbol or warning ……..:		N/A
4.4.5.3	Protection for service persons	The fan blade is not considered likely to cause pain or injury.	N/A
	Use of symbol or warning ……..:		N/A

4.5	**Thermal requirements**		P
4.5.1	General		P
4.5.2	Temperature tests		P
	Normal load condition per Annex L .....:	Rated load with continuous operation.	—
4.5.3	Temperature limits for materials	(see appended table 4.5)	P
4.5.4	Touch temperature limits	(see appended table 4.5)	P
4.5.5	Resistance to abnormal heat .....:	Certified power supply.	P

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Clause	Requirement + Test	Result - Remark	Verdict

4.6	**Openings in enclosures**		P
4.6.1	Top and side openings	Openings do not allow foreign objects entering the equipment to fall on bare parts at hazardous voltage or energy hazard. 5° projection considered.	P
	Dimensions (mm) .....:	No opening.	—
4.6.2	Bottoms of fire enclosures		P
	Construction of the bottom, dimensions (mm) .....:	No opening.	—
4.6.3	Doors or covers in fire enclosures	No door or cover.	N/A
4.6.4	Openings in transportable equipment	Not transportable equipment.	N/A
4.6.4.1	Constructional design measures		N/A
	Dimensions (mm) .....:		—
4.6.4.2	Evaluation measures for larger openings		N/A
4.6.4.3	Use of metallized parts		N/A
4.6.5	Adhesives for constructional purposes		N/A
	Conditioning temperature (°C), time (weeks) .....:		—

4.7	**Resistance to fire**		P
4.7.1	Reducing the risk of ignition and spread of flame		P
	Method 1, selection and application of components wiring and materials	(see appended table 4.7)	P
	Method 2, application of all of simulated fault condition tests		N/A
4.7.2	Conditions for a fire enclosure		P
4.7.2.1	Parts requiring a fire enclosure	Fire enclosure is required to cover all parts.	P
4.7.2.2	Parts not requiring a fire enclosure		N/A
4.7.3	Materials		P
4.7.3.1	General	Components and materials have adequate flammability classification. See appended table 1.5.1.	P
4.7.3.2	Materials for fire enclosures	Metal and glass	P
4.7.3.3	Materials for components and other parts outside fire enclosures		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
4.7.3.4	Materials for components and other parts inside fire enclosures	Min V-2	P
4.7.3.5	Materials for air filter assemblies	No air filters in the equipment.	N/A
4.7.3.6	Materials used in high-voltage components		N/A
5	**ELECTRICAL REQUIREMENTS AND SIMULATED ABNORMAL CONDITIONS**		**P**
5.1	**Touch current and protective conductor current**		P
5.1.1	General	Test conducted in accordance with 5.1.2 to 5.1.7.	P
5.1.2	Configuration of equipment under test (EUT)	No interconnection of equipment or multiple power sources.	N/A
5.1.2.1	Single connection to an a.c. mains supply		N/A
5.1.2.2	Redundant multiple connections to an a.c. mains supply		N/A
5.1.2.3	Simultaneous multiple connections to an a.c. mains supply		N/A
5.1.3	Test circuit		P
5.1.4	Application of measuring instrument	Measuring instrument D1 is used.	P
5.1.5	Test procedure		P
5.1.6	Test measurements		P
	Supply voltage (V) ..... :	(see appended table 5.1)	—
	Measured touch current (mA) ..... :	(see appended table 5.1)	—
	Max. allowed touch current (mA) ..... :	(see appended table 5.1)	—
	Measured protective conductor current (mA) ..... :		—
	Max. allowed protective conductor current (mA) .. :		—
5.1.7	Equipment with touch current exceeding 3,5 mA	The touch current does not exceed 3.5mA.	N/A
5.1.7.1	General ..... :		N/A
5.1.7.2	Simultaneous multiple connections to the supply		N/A
5.1.8	Touch currents to telecommunication networks and cable distribution systems and from telecommunication networks	No TNV circuitry.	N/A
5.1.8.1	Limitation of the touch current to a telecommunication network or to a cable distribution system		N/A
	Supply voltage (V) ..... :		—
	Measured touch current (mA) ..... :		—

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Clause	Requirement + Test	Result - Remark	Verdict
	Max. allowed touch current (mA) ..... :		—
5.1.8.2	Summation of touch currents from telecommunication networks		N/A
	a) EUT with earthed telecommunication ports ..... :		N/A
	b) EUT whose telecommunication ports have no reference to protective earth		N/A

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

5.3	**Abnormal operating and fault conditions**		P
5.3.1	Protection against overload and abnormal operation	(see appended table 5.3)	P
5.3.2	Motors	Certified DC fan	P
5.3.3	Transformers	Certified power supply.	P
5.3.4	Functional insulation ..... :	Complies with c).	P
5.3.5	Electromechanical components		N/A
5.3.6	Audio amplifiers in ITE ..... :	No audio amplifiers.	N/A
5.3.7	Simulation of faults	(see appended table 5.3)	P
5.3.8	Unattended equipment		N/A
5.3.9	Compliance criteria for abnormal operating and fault conditions	See below	P
5.3.9.1	During the tests	No fire or molten metal occurred and no deformation of enclosure.	P
5.3.9.2	After the tests	No reduction of clearance and creepage distance. Electric strength test is made on basic and reinforced insulation.	P

6	**CONNECTION TO TELECOMMUNICATION NETWORKS**		N/A
6.1	**Protection of telecommunication network service persons, and users of other equipment connected to the network, from hazards in the equipment**		N/A
6.1.1	Protection from hazardous voltages		N/A
6.1.2	Separation of the telecommunication network from earth		N/A
6.1.2.1	Requirements	No connection to telecommunication network	N/A

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Clause	Requirement + Test	Result - Remark	Verdict
	Supply voltage (V) ..... :		—
	Current in the test circuit (mA) ..... :		—
6.1.2.2	Exclusions ..... :		N/A
6.2	**Protection of equipment users from overvoltages on telecommunication networks**		N/A
6.2.1	Separation requirements		N/A
6.2.2	Electric strength test procedure		N/A
6.2.2.1	Impulse test	(see appended table 5.2)	N/A
6.2.2.2	Steady-state test	(see appended table 5.2)	N/A
6.2.2.3	Compliance criteria		N/A
6.3	**Protection of the telecommunication wiring system from overheating**		N/A
	Max. output current (A) ..... :		—
	Current limiting method ..... :		—
7	**CONNECTION TO CABLE DISTRIBUTION SYSTEMS**		N/A
7.1	**General**	No connection to cable distribution system.	N/A
7.2	Protection of cable distribution system service persons, and users of other equipment connected to the system, from hazardous voltages in the equipment		N/A
7.3	Protection of equipment users from overvoltages on the cable distribution system		N/A
7.4	Insulation between primary circuits and cable distribution systems		N/A
7.4.1	General		N/A
7.4.2	Voltage surge test	(see appended table 5.2)	N/A
7.4.3	Impulse test	(see appended table 5.2)	N/A
A	**ANNEX A, TESTS FOR RESISTANCE TO HEAT AND FIRE**		N/A
A.1	**Flammability test for fire enclosures of movable equipment having a total mass exceeding 18 kg, and of stationary equipment (see 4.7.3.2)**		N/A
A.1.1	Samples..... :		—
	Wall thickness (mm)..... :		—

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Clause	Requirement + Test	Result - Remark	Verdict
A.1.2	Conditioning of samples; temperature (°C) .....:		N/A
A.1.3	Mounting of samples .....:		N/A
A.1.4	Test flame (see IEC 60695-11-3)		N/A
	Flame A, B, C or D .....:		—
A.1.5	Test procedure		N/A
A.1.6	Compliance criteria		N/A
	Sample 1 burning time (s) .....:		—
	Sample 2 burning time (s) .....:		—
	Sample 3 burning time (s) .....:		—
A.2	**Flammability test for fire enclosures of movable equipment having a total mass not exceeding 18 kg, and for material and components located inside fire enclosures (see 4.7.3.2 and 4.7.3.4)**		N/A
A.2.1	Samples, material .....:		—
	Wall thickness (mm).....:		—
A.2.2	Conditioning of samples; temperature (°C) .....:		N/A
A.2.3	Mounting of samples .....:		N/A
A.2.4	Test flame (see IEC 60695-11-4)		N/A
	Flame A, B or C .....:		—
A.2.5	Test procedure		N/A
A.2.6	Compliance criteria		N/A
	Sample 1 burning time (s) .....:		—
	Sample 2 burning time (s) .....:		—
	Sample 3 burning time (s) .....:		—
A.2.7	Alternative test acc. to IEC 60695-11-5, cl. 5 and 9		N/A
	Sample 1 burning time (s) .....:		—
	Sample 2 burning time (s) .....:		—
	Sample 3 burning time (s) .....:		—
A.3	**Hot flaming oil test (see 4.6.2)**		N/A
A.3.1	Mounting of samples		N/A
A.3.2	Test procedure		N/A
A.3.3	Compliance criterion		N/A
B	**ANNEX B, MOTOR TESTS UNDER ABNORMAL CONDITIONS (see 4.7.2.2 and 5.3.2)**		N/A
B.1	**General requirements**	Certified DC fan only.	N/A
	Position .....:		—

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Clause	Requirement + Test	Result - Remark	Verdict
	Manufacturer ..... :		—
	Type ..... :		—
	Rated values ..... :		—
B.2	**Test conditions**		N/A
B.3	**Maximum temperatures**	(see appended table 5.3)	N/A
B.4	**Running overload test**	(see appended table 5.3)	N/A
B.5	**Locked-rotor overload test**		N/A
	Test duration (days) ..... :		—
	Electric strength test: test voltage (V) ..... :		—
B.6	**Running overload test for d.c. motors in secondary circuits**		N/A
B.6.1	General		N/A
B.6.2	Test procedure		N/A
B.6.3	Alternative test procedure		N/A
B.6.4	Electric strength test; test voltage (V) ..... :		N/A
B.7	**Locked-rotor overload test for d.c. motors in secondary circuits**		N/A
B.7.1	General		N/A
B.7.2	Test procedure		N/A
B.7.3	Alternative test procedure		N/A
B.7.4	Electric strength test; test voltage (V) ..... :		N/A
B.8	**Test for motors with capacitors**	(see appended table 5.3)	N/A
B.9	**Test for three-phase motors**	(see appended table 5.3)	N/A
B.10	**Test for series motors**		N/A
	Operating voltage (V) ..... :		—
C	**ANNEX C, TRANSFORMERS (see 1.5.4 and 5.3.3)**		P
	Position ..... :	Isolating transformer in pre certified power supply.	—
	Manufacturer ..... :		—
	Type ..... :		—
	Rated values ..... :		—
	Method of protection ..... :		—
C.1	**Overload test**	Isolating transformer in pre certified power supply.	P
C.2	**Insulation**		P

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Clause	Requirement + Test	Result - Remark	Verdict
	Protection from displacement of windings.....:	Tube and tape	P
D	**ANNEX D, MEASURING INSTRUMENTS FOR TOUCH-CURRENT TESTS (see 5.1.4)**		P
D.1	**Measuring instrument**		P
D.2	**Alternative measuring instrument**		N/A
E	**ANNEX E, TEMPERATURE RISE OF A WINDING (see 1.4.13)**		N/A
F	**ANNEX F, MEASUREMENT OF CLEARANCES AND CREEPAGE DISTANCES (see 2.10 and Annex G)**		P
G	**ANNEX G, ALTERNATIVE METHOD FOR DETERMINING MINIMUM CLEARANCES**		N/A
G.1	**Clearances**		N/A
G.1.1	General		N/A
G.1.2	Summary of the procedure for determining minimum clearances		N/A
G.2	**Determination of mains transient voltage (V)**		N/A
G.2.1	AC mains supply .....:		N/A
G.2.2	Earthed d.c. mains supplies .....:		N/A
G.2.3	Unearthed d.c. mains supplies .....:		N/A
G.2.4	Battery operation .....:		N/A
G.3	**Determination of telecommunication network transient voltage (V) .....:**		N/A
G.4	**Determination of required withstand voltage (V)**		N/A
G.4.1	Mains transients and internal repetitive peaks ....:		N/A
G.4.2	Transients from telecommunication networks .....:		N/A
G.4.3	Combination of transients		N/A
G.4.4	Transients from cable distribution systems		N/A
G.5	**Measurement of transient voltages (V)**		N/A
	a) Transients from a mains supply		N/A
	For an a.c. mains supply		N/A
	For a d.c. mains supply		N/A
	b) Transients from a telecommunication network		N/A
G.6	**Determination of minimum clearances .....:**		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
H	**ANNEX H, IONIZING RADIATION (see 4.3.13)**		N/A
J	**ANNEX J, TABLE OF ELECTROCHEMICAL POTENTIALS (see 2.6.5.6)**		P
	Metal(s) used .....:	Comply	—
K	**ANNEX K, THERMAL CONTROLS (see 1.5.3 and 5.3.8)**		N/A
K.1	Making and breaking capacity	No thermal control.	N/A
K.2	Thermostat reliability; operating voltage (V) .....:		N/A
K.3	Thermostat endurance test; operating voltage (V) .....:		N/A
K.4	Temperature limiter endurance; operating voltage (V) .....:		N/A
K.5	Thermal cut-out reliability		N/A
K.6	Stability of operation	(see appended table 5.3)	N/A
L	**ANNEX L, NORMAL LOAD CONDITIONS FOR SOME TYPES OF ELECTRICAL BUSINESS EQUIPMENT (see 1.2.2.1 and 4.5.2)**		P
L.1	Typewriters		N/A
L.2	Adding machines and cash registers		N/A
L.3	Erasers		N/A
L.4	Pencil sharpeners		N/A
L.5	Duplicators and copy machines		N/A
L.6	Motor-operated files		N/A
L.7	Other business equipment		P
M	**ANNEX M, CRITERIA FOR TELEPHONE RINGING SIGNALS (see 2.3.1)**		N/A
M.1	Introduction		N/A
M.2	Method A		N/A
M.3	Method B		N/A
M.3.1	Ringing signal		N/A
M.3.1.1	Frequency (Hz) .....:		—
M.3.1.2	Voltage (V) .....:		—
M.3.1.3	Cadence; time (s), voltage (V) .....:		—
M.3.1.4	Single fault current (mA) .....:		—
M.3.2	Tripping device and monitoring voltage .....:		N/A
M.3.2.1	Conditions for use of a tripping device or a monitoring voltage		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
M.3.2.2	Tripping device		N/A
M.3.2.3	Monitoring voltage (V) .....:		N/A
N	**ANNEX N, IMPULSE TEST GENERATORS (see 1.5.7.2, 1.5.7.3, 2.10.3.9, 6.2.2.1, 7.3.2, 7.4.3 and Clause G.5)**		N/A
N.1	ITU-T impulse test generators		N/A
N.2	IEC 60065 impulse test generator		N/A
P	**ANNEX P, NORMATIVE REFERENCES**		—
Q	**ANNEX Q, Voltage dependent resistors (VDRs) (see 1.5.9.1)**		N/A
	- Preferred climatic categories .....:	Certified power supply.	N/A
	- Maximum continuous voltage .....:		N/A
	- Combination pulse current .....:		N/A
	Body of the VDR Test according to IEC60695-11-5.....:		N/A
	Body of the VDR. Flammability class of material (min V-1).....:		N/A
R	**ANNEX R, EXAMPLES OF REQUIREMENTS FOR QUALITY CONTROL PROGRAMMES**		N/A
R.1	Minimum separation distances for unpopulated coated printed boards (see 2.10.6.2)		N/A
R.2	Reduced clearances (see 2.10.3)		N/A
S	**ANNEX S, PROCEDURE FOR IMPULSE TESTING (see 6.2.2.3)**		N/A
S.1	Test equipment		N/A
S.2	Test procedure		N/A
S.3	Examples of waveforms during impulse testing		N/A
T	**ANNEX T, GUIDANCE ON PROTECTION AGAINST INGRESS OF WATER (see 1.1.2)**		N/A
		See separate test report	—
U	**ANNEX U, INSULATED WINDING WIRES FOR USE WITHOUT INTERLEAVED INSULATION (see 2.10.5.4)**		N/A
		Certified power supply	—

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Clause	Requirement + Test	Result - Remark	Verdict

V	**ANNEX V, AC POWER DISTRIBUTION SYSTEMS (see 1.6.1)**		P
V.1	Introduction		P
V.2	TN power distribution systems		P

W	**ANNEX W, SUMMATION OF TOUCH CURRENTS**		N/A
W.1	Touch current from electronic circuits		N/A
W.1.1	Floating circuits		N/A
W.1.2	Earthed circuits		N/A
W.2	Interconnection of several equipments		N/A
W.2.1	Isolation		N/A
W.2.2	Common return, isolated from earth		N/A
W.2.3	Common return, connected to protective earth		N/A

X	**ANNEX X, MAXIMUM HEATING EFFECT IN TRANSFORMER TESTS (see clause C.1)**		P
X.1	Determination of maximum input current	Certified power supply	P
X.2	Overload test procedure		P

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

Z	**ANNEX Z, OVERVOLTAGE CATEGORIES (see 2.10.3.2 and Clause G.2)**	P

AA	**ANNEX AA, MANDREL TEST (see 2.10.5.8)**	N/A

BB	**ANNEX BB, CHANGES IN THE SECOND EDITION**	—

CC	**ANNEX CC, Evaluation of integrated circuit (IC) current limiters**		N/A
CC.1	General		N/A
CC.2	Test program 1.....:		N/A
CC.3	Test program 2.....:		N/A
CC.4	Test program 3.....:		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
CC.5	Compliance.....:		N/A
DD	**ANNEX DD, Requirements for the mounting means of rack-mounted equipment**		N/A
DD.1	General		N/A
DD.2	Mechanical strength test, variable N……..:		N/A
DD.3	Mechanical strength test, 250N, including end stops……:		N/A
DD.4	Compliance……:		N/A
EE	**ANNEX EE, Household and home/office document/media shredders**		N/A
EE.1	General		N/A
EE.2	Markings and instructions		N/A
	Use of markings or symbols……:		N/A
	Information of user instructions, maintenance and/or servicing instructions……:		N/A
EE.3	Inadvertent reactivation test……:		N/A
EE.4	Disconnection of power to hazardous moving parts:		N/A
	Use of markings or symbols……:		N/A
EE.5	Protection against hazardous moving parts		N/A
	Test with test finger (Figure 2A) ……:		N/A
	Test with wedge probe (Figure EE1 and EE2) ……:		N/A

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Clause	Requirement + Test	Result - Remark	Verdict

1.5.1	TABLE: List of critical components				P
Object/part No.	Manufacturer/ trademark	Type/model	Technical data	Standard (Edition / year)	Mark(s) of conformity[1])
Metal enclosure	Interchangeable	—	Min 1,5mm thick	IEC 60950-1	—
Plastic enclosure (Out of fire enclosure)	KINGFA SCI & TECH CO LTD	HG-168A2(c) (r2)	HB, Min. thickness: 2.5mm, 65°C	UL746 UL94	UL E171666
Precision Plastic Parts (Not for fire enclosure)	SABIC JAPAN LLC	DX10311	2 mm, HB	UL746 UL94	UL E207780
Terminal block	NINGBO DEGSON ELECTRICAL CO LTD	WS2.5-DIN15*kk	600V, 20A, 105°C	UL486E	UL E228872
AC Adapter	CHANNEL WELL TECHNOLOGY CO., LTD	KPB-060F2	input：100-240~ 1.7A 50Hz-60Hz; output:+12V 5.0 A , 5V square signal max power 60W	IEC60950-1：2005+A1+A2	TUV Rheinland certfitcate No.: JPTUV-063302; Report No.: 15078388 001
PCB	SHENZHEN XUNJIEXING CIRCUIT TECH CO LTD	JX02	V-0, 130°C; Min thickness 1,5mm	UL 796 UL 94	UL E305654
- alt.	HUIZHOU CHINA EAGLE ELECTRONIC TECHNOLOGY CO LTD	CA-F121	V-0, 130°C	UL 796 UL 94	UL E198681
- alt.	Interchangeable	—	Min V-1, 105°C	UL 94	UL
Lithium coin battery	FDK CORPORATION	ML614R	3V d. c., 2.5mAh, Max charging current 300mA, Max charging voltage 5V	UL1642	UL MH13421
IR LED	OSRAM Opto Semiconductord Asia Limited	SFH4715S	VF=2,9-3,4Vdc IF=1A, 850nm Exempt group	IEC 62471	Test with appliance
LED	OSRAM Opto Semiconductors	GW PUSRA1.PM	450nm, 1800mA RG1 after 0,5m	IEC 62471:2006	Test by OSRAM, report No.:010-16a

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Clause	Requirement + Test	Result - Remark	Verdict

DC Fan	Sunonwealth Electric Machine Industry Co., Ltd	EF50151B1-C02C-A99	DC12V, 0,145A, 4,9CFM	IEC/EN 60950-1	TÜV Cert No.: R 50275749
Alternative	Xinruilian Electronics (zhaoqing) Co., Ltd.	RBH5015B XRL	DC12V, 0,14A, 5,1CFM	IEC/EN 60950-1	TÜV Cert No.: R 50027813
Heating Module	Shenzhen Fulianda Electric Heater Manufacture Co., Ltd.	FLD-239-303	12 V, 30 W	IEC/EN 60950-1	Test with appliance
Wires	Interchangeable	Interchangeable	PVC, TFE, PTFE, FEP, polychloroprene or polyimide or VW-1	--	--
Supplementary information: [1)] **Provided evidence ensures the agreed level of compliance. See OD-CB2039**.					

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

1.5.1	TABLE: Opto Electronic Devices	N/A

Manufacturer.....:

Type .....:

Separately tested.....:

Bridging insulation.....:

External creepage distance.....:

Internal creepage distance .....:

Distance through insulation .....:

Tested under the following conditions.....:

Input .....:

Output.....:

supplementary information

1.6.2	TABLE: Electrical data (in normal conditions)					P
U (V)	I (A)	Irated (A)	P (W)	Fuse #	Ifuse (A)	Condition/status
For model iDS-TCV500-BI						
90V 50Hz	0.225	--	10.9	F1	0.225	Normal operation condition
90V 60Hz	0.222	--	11.0	F1	0.222	Normal operation condition
100V 50Hz	0.208	0.9	10.9	F1	0.208	Normal operation condition
100V 60Hz	0.206	0.9	10.9	F1	0.206	Normal operation condition
240V 50Hz	0.098	0.9	11.3	F1	0.098	Normal operation condition
240V 60Hz	0.099	0.9	11.3	F1	0.099	Normal operation condition
264V 50Hz	0.094	--	11.4	F1	0.094	Normal operation condition
264V 60Hz	0.096	--	11.4	F1	0.096	Normal operation condition
For model iDS-TCE900-B						
90V 50Hz	0.32	--	15.5	F1	0.32	Normal operation condition
90V 60Hz	0.30	--	14.2	F1	0.30	Normal operation condition
100V 50Hz	0.29	0.9	15.5	F1	0.29	Normal operation condition
100V 60Hz	0.28	0.9	14.2	F1	0.28	Normal operation condition
240V 50Hz	0.13	0.9	15.8	F1	0.13	Normal operation condition

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Clause	Requirement + Test	Result - Remark	Verdict

240V 60Hz	0.12	0.9	14.5	F1	0.12	Normal operation condition
264V 50Hz	0.12	--	15.8	F1	0.12	Normal operation condition
264V 60Hz	0.12	--	14.6	F1	0.12	Normal operation condition
Supplementary information:						

2.1.1.5 c) 1)	TABLE: max. V, A, VA test	N/A

Voltage (rated) (V)	Current (rated) (A)	Voltage (max.) (V)	Current (max.) (A)	VA (max.) (VA)
-	-	-	-	-
-	-	-	-	-
supplementary information:				

2.1.1.5 c) 2)	TABLE: stored energy	N/A

Capacitance C (µF)	Voltage U (V)	Energy E (J)
-	-	-
supplementary information:		

2.2	TABLE: evaluation of voltage limiting components in SELV circuits	N/A

Component (measured between)	max. voltage (V) (normal operation)		Voltage Limiting Components
	V peak	V d.c.	
-	-	-	-

Fault test performed on voltage limiting components	Voltage measured (V) in SELV circuits (V peak or V d.c.)
-	-
supplementary information:	

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Clause	Requirement + Test	Result - Remark	Verdict

2.5	TABLE: Limited power sources	N/A

Circuit output tested:

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

Components	Sample No.	Uoc (V)	I_{sc} (A)		VA	
			Meas.	Limit	Meas.	Limit
-	-	-	-	-	-	-

supplementary information:

Sc=Short circuit, Oc=Open circuit

2.10.2	Table: working voltage measurement	N/A

Location	RMS voltage (V)	Peak voltage (V)	Comments
-	-	-	-

supplementary information:

2.10.3 and 2.10.4	TABLE: Clearance and creepage distance measurements	N/A

Clearance (cl) and creepage distance (cr) at/of/between:	U peak (V)	U r.m.s. (V)	Required cl (mm)	cl (mm)	Required cr (mm)	cr (mm)
Functional:						
Basic/supplementary:						
Reinforced:						
Supplementary information:						

2.10.5	TABLE: Distance through insulation measurements	N/A

Distance through insulation (DTI) at/of:	U peak (V)	U rms (V)	Test voltage (V)	Required DTI (mm)	DTI (mm)
Supplementary information:					

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Clause	Requirement + Test	Result - Remark	Verdict

4.3.8	TABLE: Batteries		P
The tests of 4.3.8 are applicable only when appropriate battery data is not available			P
Is it possible to install the battery in a reverse polarity position?		Battery can't in reverse polarity according to the design.	N/A

	Non-rechargeable batteries			Rechargeable batteries					
	Discharging		Un-intentional charging	Charging		Discharging		Reversed charging	
	Meas. current	Manuf. Specs.		Meas. current	Manuf. Specs.	Meas. current	Manuf. Specs.	Meas. current	Manuf. Specs.
Max. current during normal condition	--	--	--	2,44mA	300mA	0,62µA	--	Prevented	--
Max. current during fault condition	--	--	--	24,5mA RA11 Sc	300mA	3,5mA CC1 Sc	--	Prevented	--

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		

4.3.8	TABLE: Batteries	P

Battery category..... :	Lithium
Manufacturer..... :	See appended table 1.5.1
Type / model..... :	See appended table 1.5.1
Voltage ..... :	See appended table 1.5.1
Capacity ..... :	See appended table 1.5.1
Tested and Certified by (incl. Ref. No.)..... :	See appended table 1.5.1
Circuit protection diagram:	

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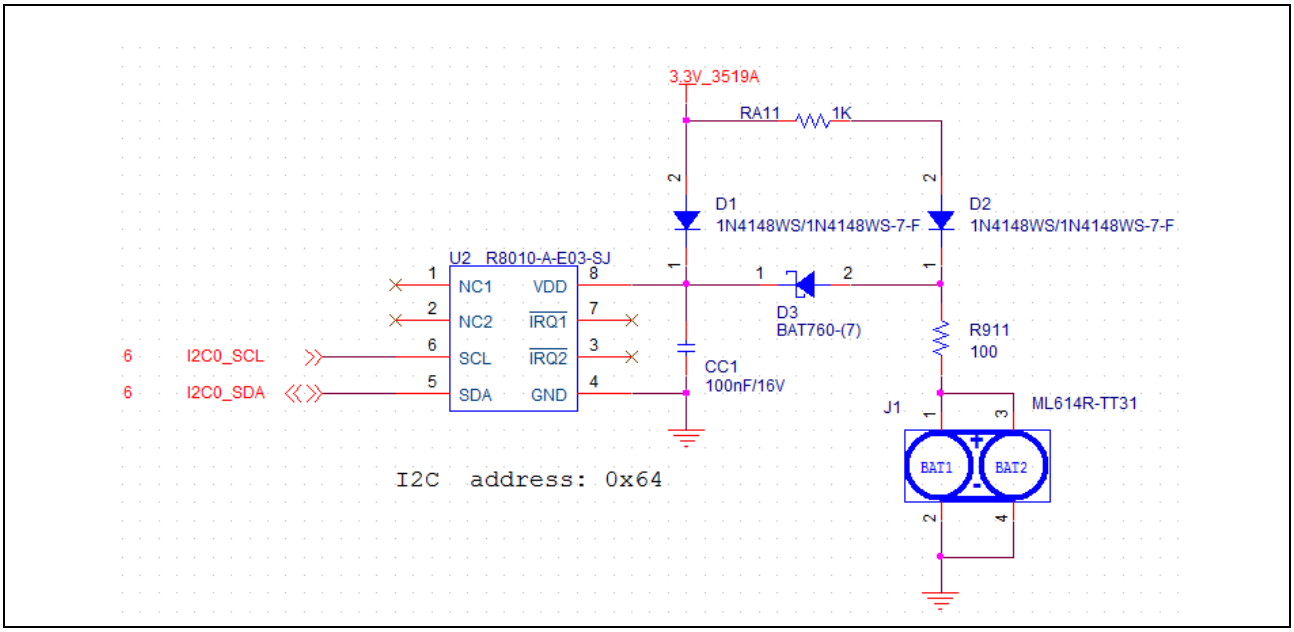
Clause	Requirement + Test	Result - Remark	Verdict



MARKINGS AND INSTRUCTIONS (1.7.13)	
Location of replaceable battery	Located in service access area.
Language(s) ……:	English
Close to the battery ……:	N/A
In the servicing instructions ……:	P
In the operating instructions ……:	P

4.5	TABLE: Thermal requirements				P
	Supply voltage (V) ……:	90V 60Hz	264V 50Hz	--	—
	Ambient T_{min} (°C) ……:	60,0	60,0	--	—
	Ambient T_{max} (°C) ……:	60,0	60,0	--	—
Maximum measured temperature T of part/at……:		T (°C)			Allowed T_{max} (°C)
For model iDS-TCV500-BI					
PCB near UT2		80,9	84,9	--	130
PCB near U1		84,1	88,1	--	130
PCB near U9		77,1	80,7	--	130
PCB near U5		78,7	82,7	--	130
PCB near U11		80,8	84,8	--	130
Battery		81,7	86,2	--	Ref.

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Clause	Requirement + Test	Result - Remark	Verdict

PCB near battery	81,1	85,5	--	130
Metal enclosure	64,7	65,0	--	70
Lens	65,5	65,9	--	80
Power supply				
PCB near BD1	73,9	74,2	--	130
T1 coil	80,2	81,0	--	110
T1 core	78,4	79,3	--	110
CY1 body	76,7	77,3	--	125
U2 body	78,2	78,8	--	110
Internal plastic near T1	73,5	76,4	--	Ref.
External plastic near T1	72,3	75,7	--	Ref.
For model iDS-TCE900-B				
PCB near UT2	86,4	86,5	--	130
PCB near U1	89,7	89,9	--	130
PCB near U9	86,6	86,8	--	130
PCB near U5	84,1	84,2	--	130
PCB near U11	84,4	84,6	--	130
Battery	87,1	87,3	--	Ref.
PCB near battery	87,1	87,4	--	130
Metal enclosure	66,7	66,5	--	70
Lens	68,5	68,6	--	80
Power supply				
PCB near BD1	78,9	79,0	--	130
T1 coil	85,3	85,6	--	110
T1 core	75,0	75,1	--	110
CY1 body	82,0	82,2	--	125
U2 body	83,5	83,7	--	110
Internal plastic near T1	71,6	71,6	--	Ref.
External plastic near T1	69,4	69,4	--	Ref.
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:

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Clause	Requirement + Test	Result - Remark	Verdict

4.5.5	TABLE: Ball pressure test of thermoplastic parts		N/A
	Allowed impression diameter (mm) ..... :	≤ 2 mm	—

Part	Test temperature (°C)	Impression diameter (mm)
-	-	-

Supplementary information:

4.7	TABLE: Resistance to fire				P
Part	Manufacturer of material	Type of material	Thickness (mm)	Flammability class	Evidence
-	-	-	-	-	-

Supplementary information:
See appended table 1.5.1.

5.1	TABLE: touch current measurement		P
Measured between:	Measured (mA)	Limit (mA)	Comments/conditions
For model iDS-TCV500-BI			
L/N and metal enclosure	0,3	3,5	-
L/N and plastic enclosure	0,135	0,25	-
L/N and terminals	0,135	0,25	-
For model iDS-TCE900-B			
L/N and metal enclosure	0,3	3,5	-
L/N and plastic enclosure	0,15	0,25	-
L/N and terminals	0,15	0,25	-
supplementary information:			
Tested with 264V 60Hz			

5.2	TABLE: Electric strength tests, impulse tests and voltage surge tests			P
Test voltage applied between:	Voltage shape (AC, DC, impulse, surge)	Test voltage (V)	Breakdown Yes / No	
Functional:				
L and N before fuse	-	-	-	
Basic/supplementary:				
L/N and metal enclosure	DC	2532	-	

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Clause	Requirement + Test	Result - Remark	Verdict

Reinforced:			
L/N and plastic enclosure	AC	3000	-
L/N and secondary terminals	AC	3000	-
Supplementary information: Test with two models.			

5.3	TABLE: Fault condition tests		P
	Ambient temperature (°C) ..... :	25°C, if not specified	—
	Power source for EUT: Manufacturer, model/type, output rating ..... :	See table 1.5.1	—

Component No.	Fault	Supply voltage (V)	Test time	Fuse #	Fuse current (A)	Observation
For model iDS-TCV500-BI						
DC fan	Locked	264	2h18mins	F1	0.094	The EUT normal operation. PCB near U1: 54.1°C; T1 coil: 46.7°C; T1 core: 45.4°C; Metal enclosure: 29.7°C; Ambient: 25.2°C. No damaged, no hazards.
For model iDS-TCE900-B						
DC fan	Locked	264	45mins	F1	0.12	The EUT normal operation. PCB near U1: 52.8°C; T1 coil: 48.4°C; T1 core: 37.9°C; Metal eclosure: 29.4°C; Ambient: 22.8°C. No damaged, no hazards.
Supplementary information:						

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

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Clause	Requirement + Test	Result - Remark	Verdict

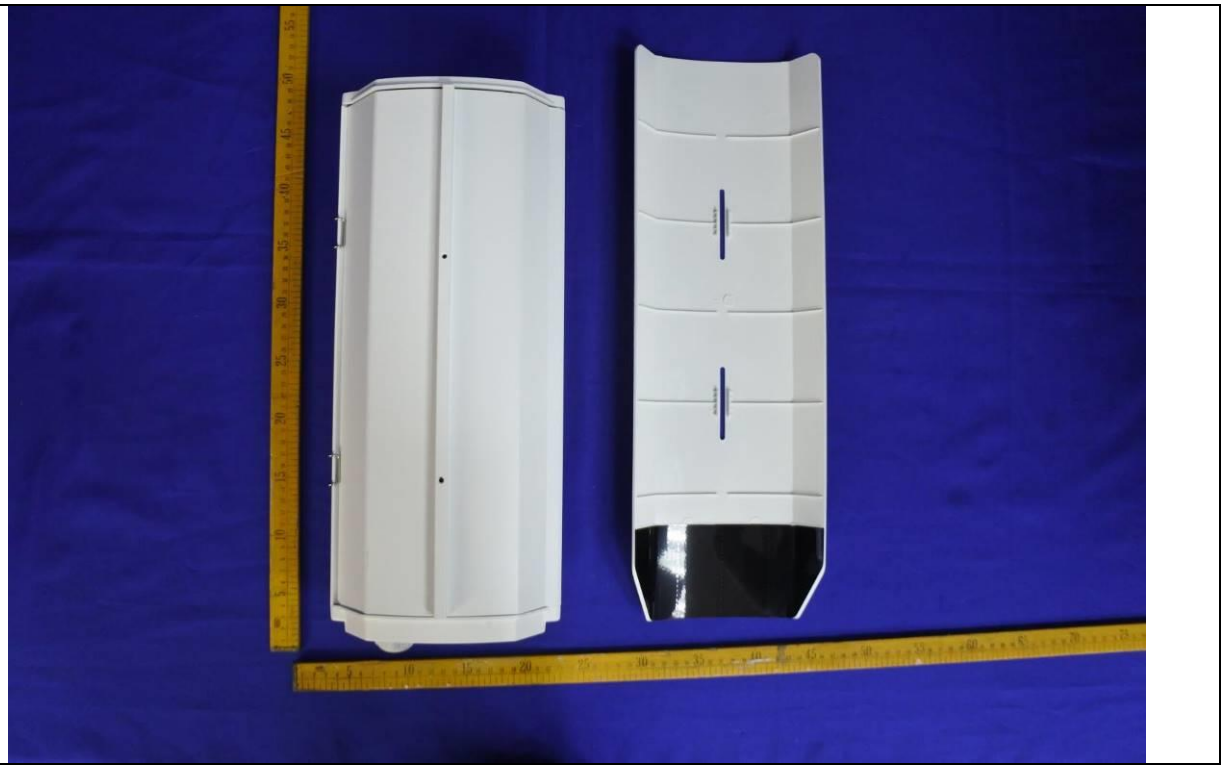
-	-	-	-	-	-
supplementary information:					

C.2	TABLE: transformers	N/A
Transformer --		

******* End of test report *******

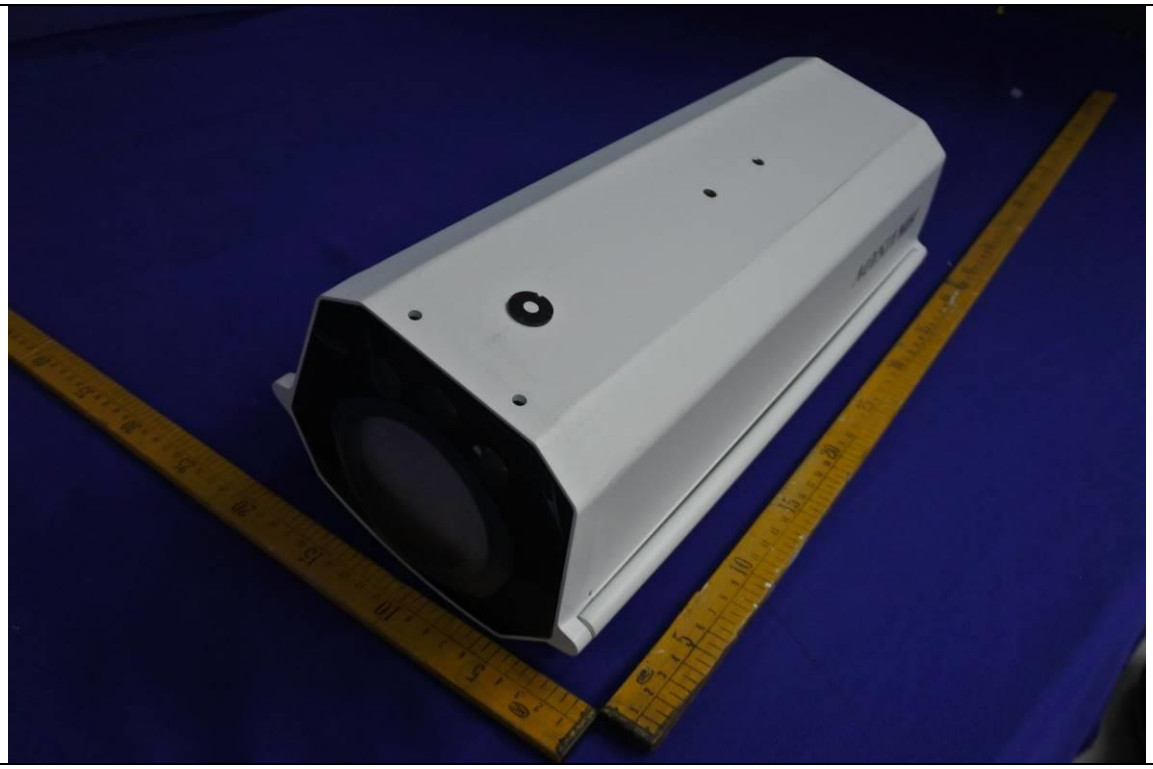
Details of: General view (model: iDS-TCV500-BI)

Details of: General view (model: iDS-TCV500-BI)

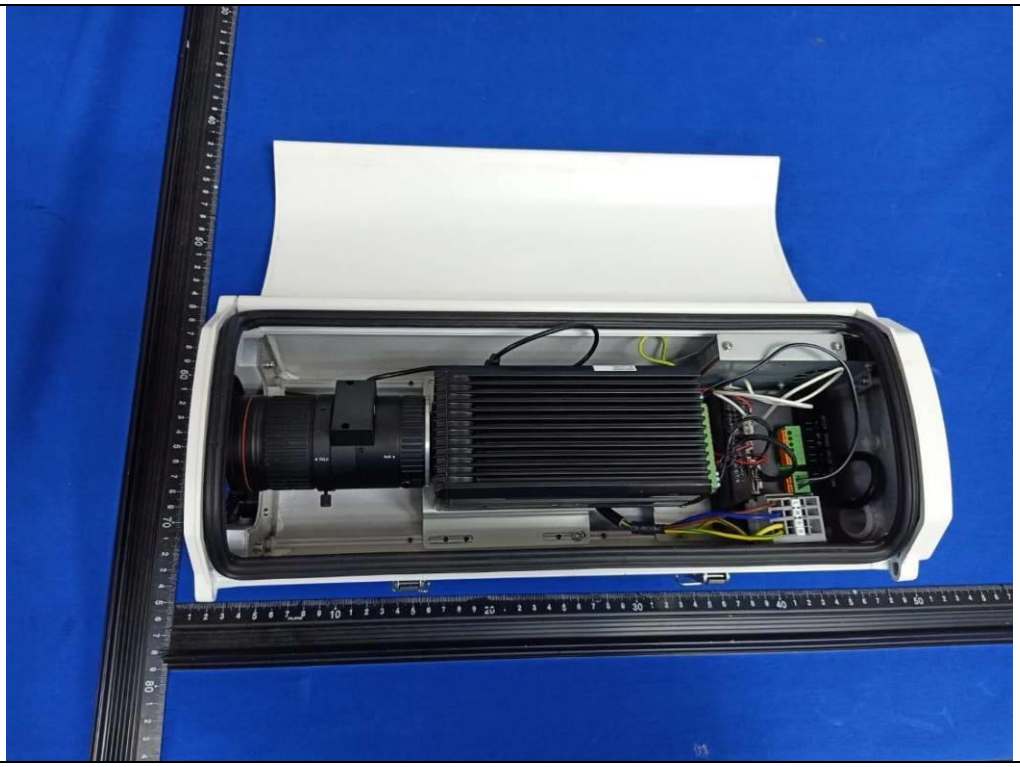


Details of: General view (model: iDS-TCV500-BI)

Details of: Internal view (model: iDS-TCV500-BI)



Details of: Internal view (model: iDS-TCV500-BI)



Details of: Internal view (model: iDS-TCV500-BI)

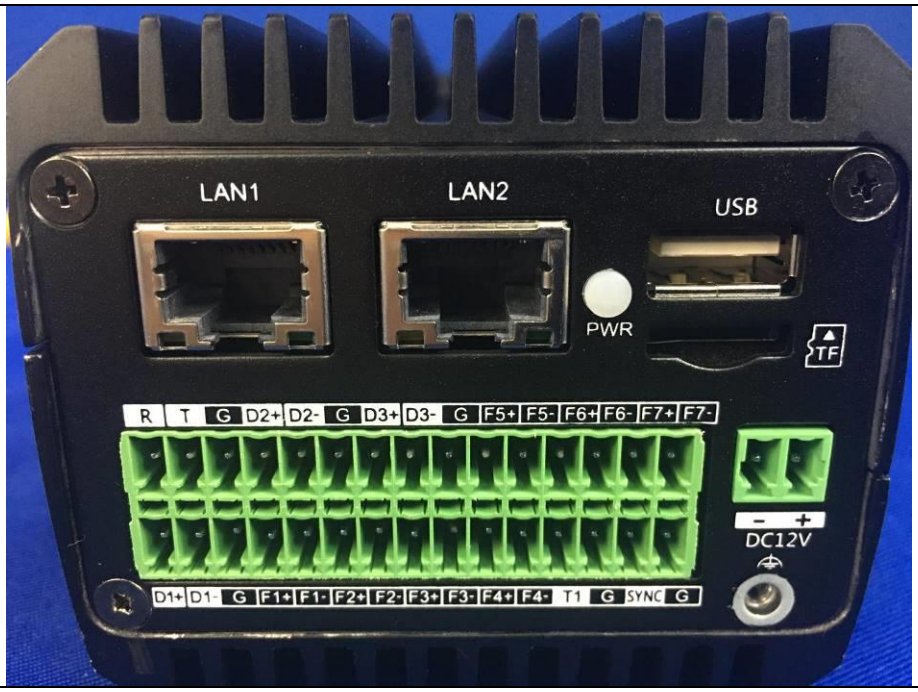
Details of: Internal view (model: iDS-TCV500-BI)

Details of: Internal view (model: iDS-TCV500-BI)

Details of: Internal view (model: iDS-TCV500-BI)

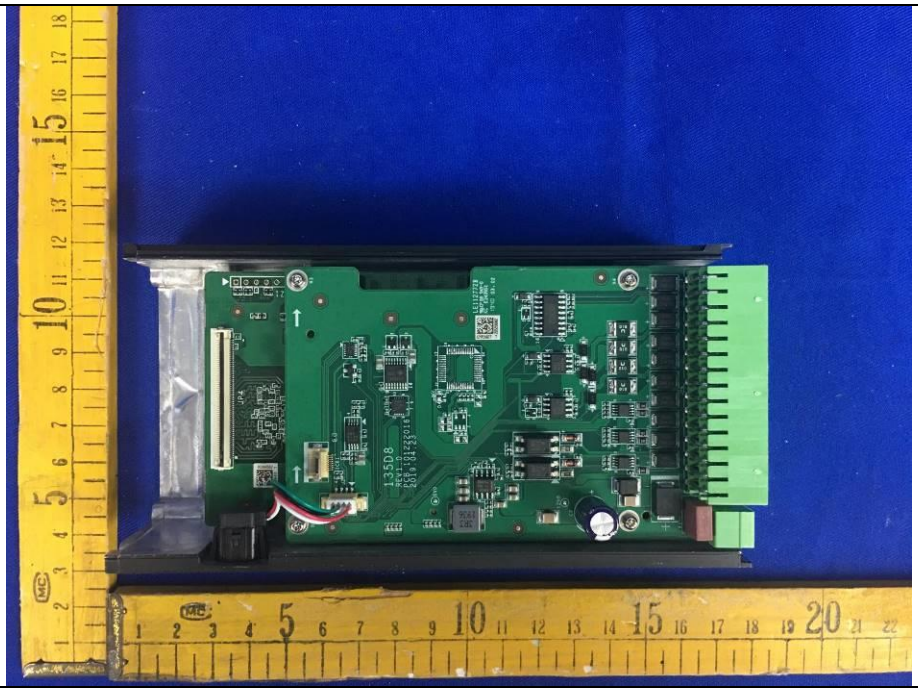
Details of: Internal view (model: iDS-TCV500-BI)

Details of: Terminals view (model: iDS-TCV500-BI)



Details of: Internal view (model: iDS-TCV500-BI)

Details of: Internal view (model: iDS-TCV500-BI)



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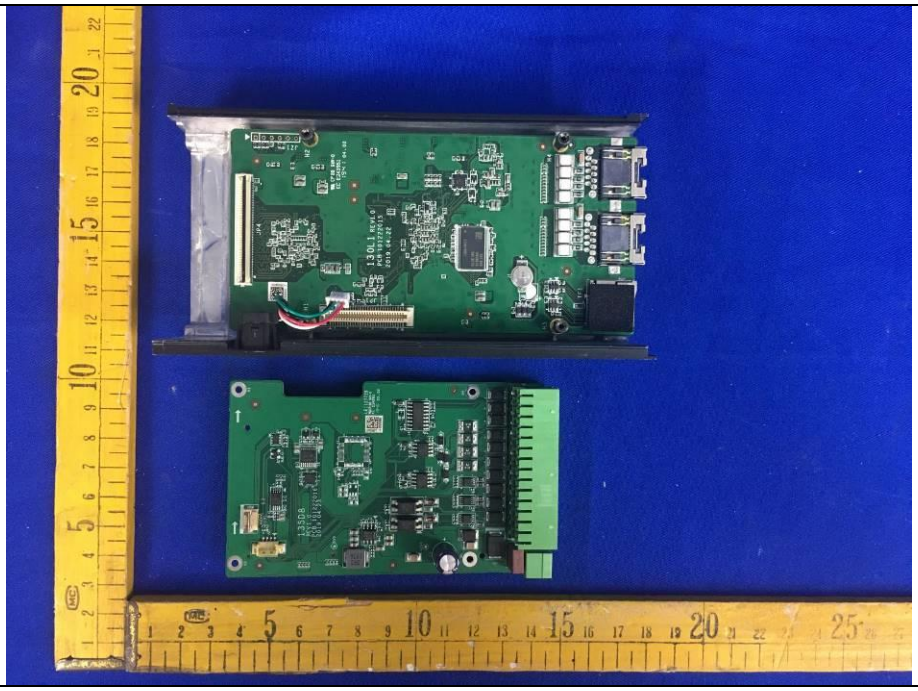
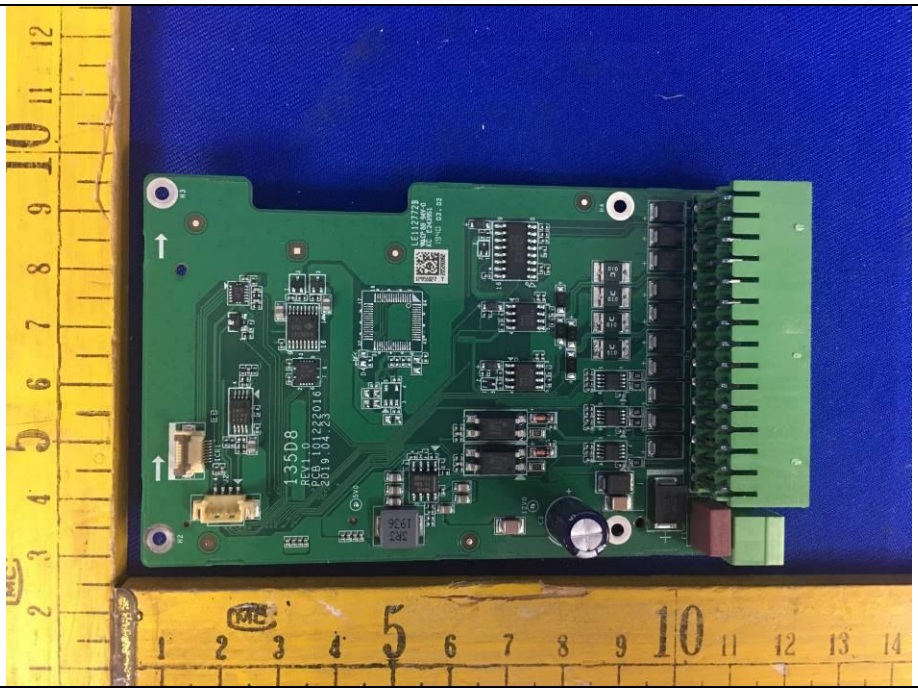
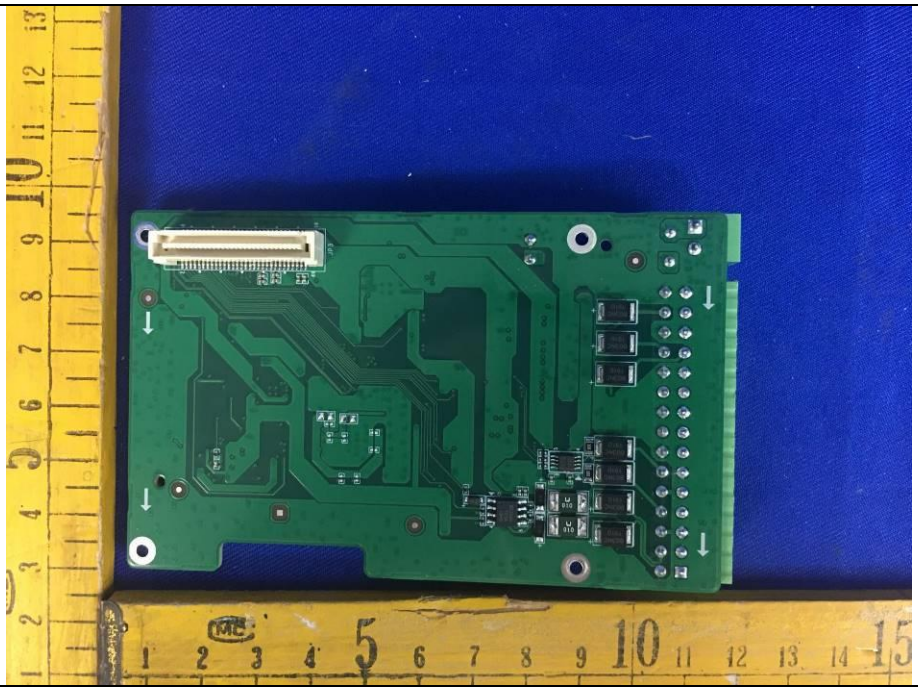


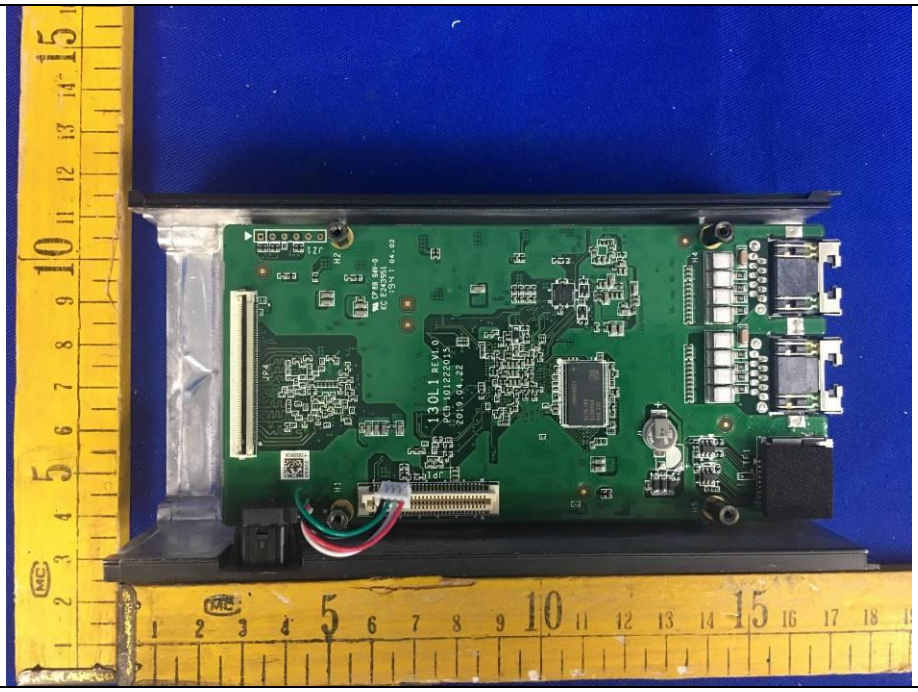
Details of: PCB-1



Details of: PCB-1



Details of: Internal view (model: iDS-TCV500-BI)



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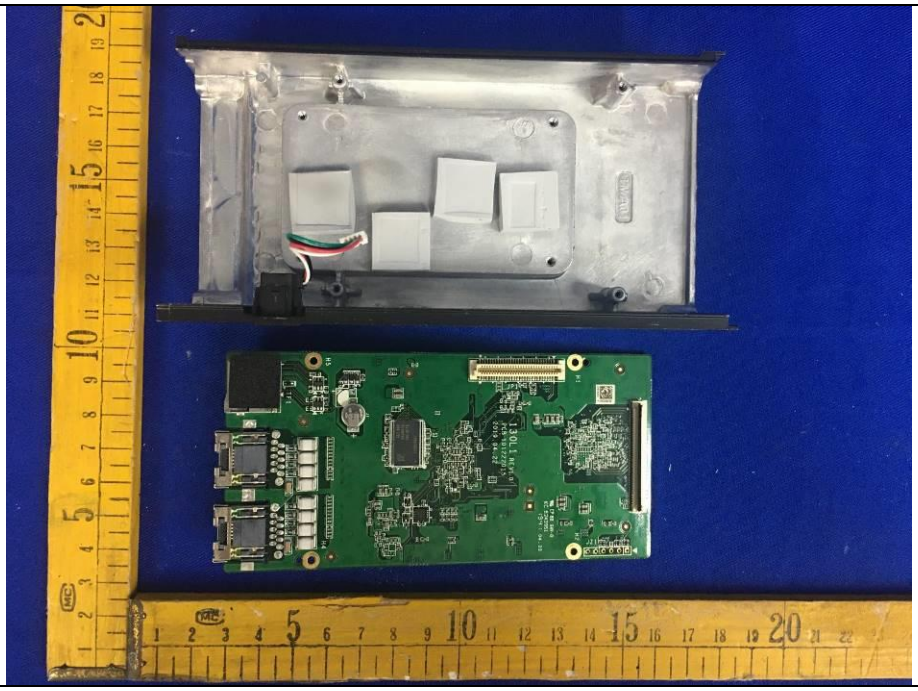

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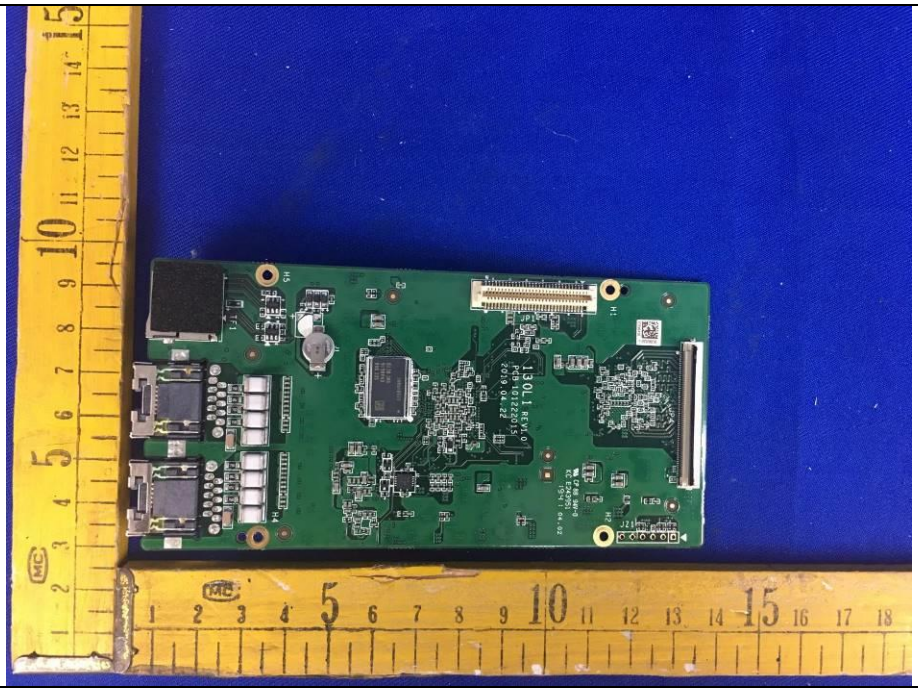
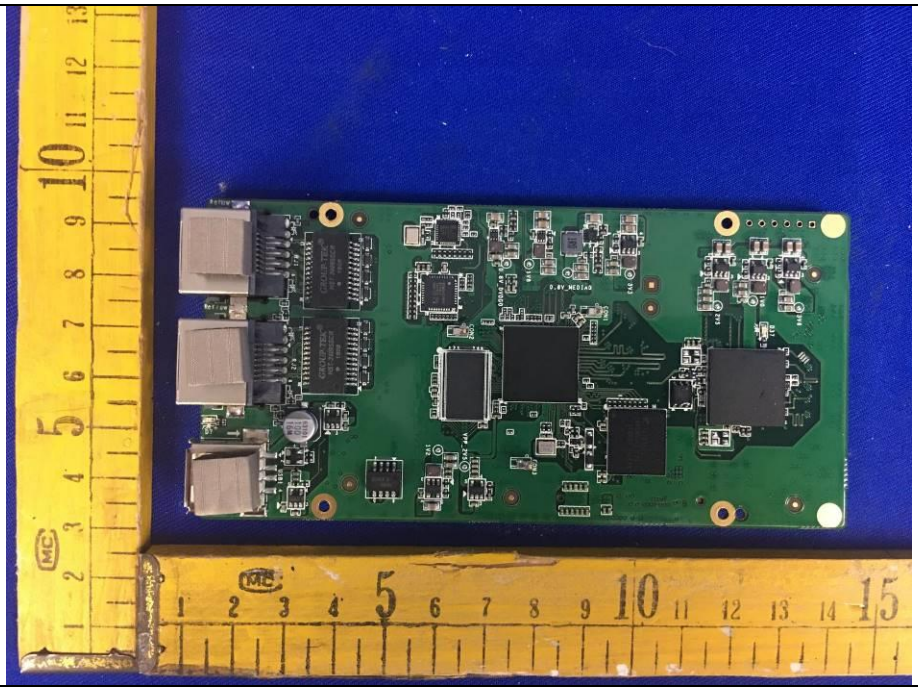


Details of: PCB-2



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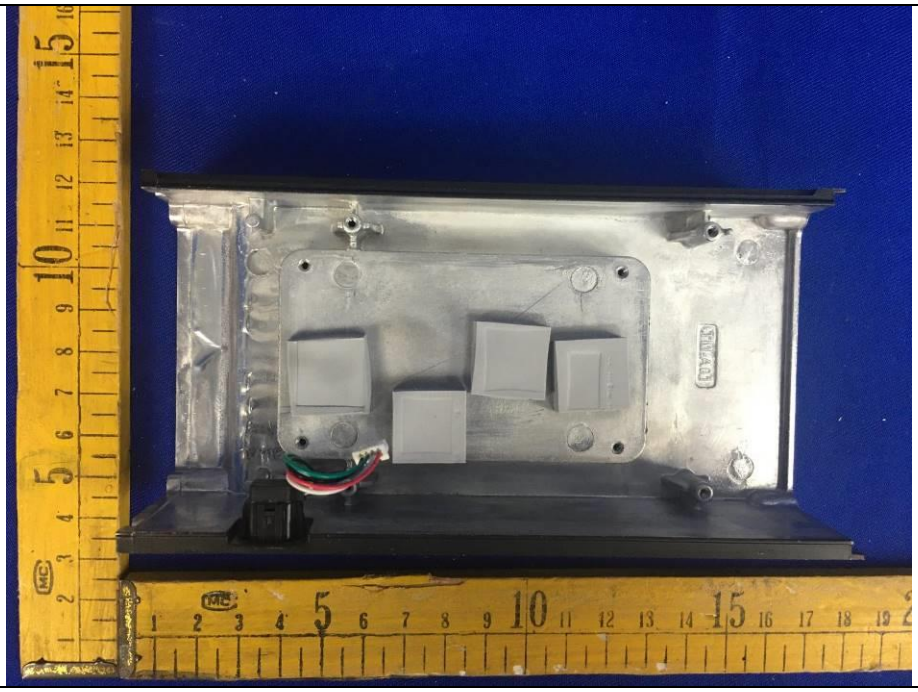
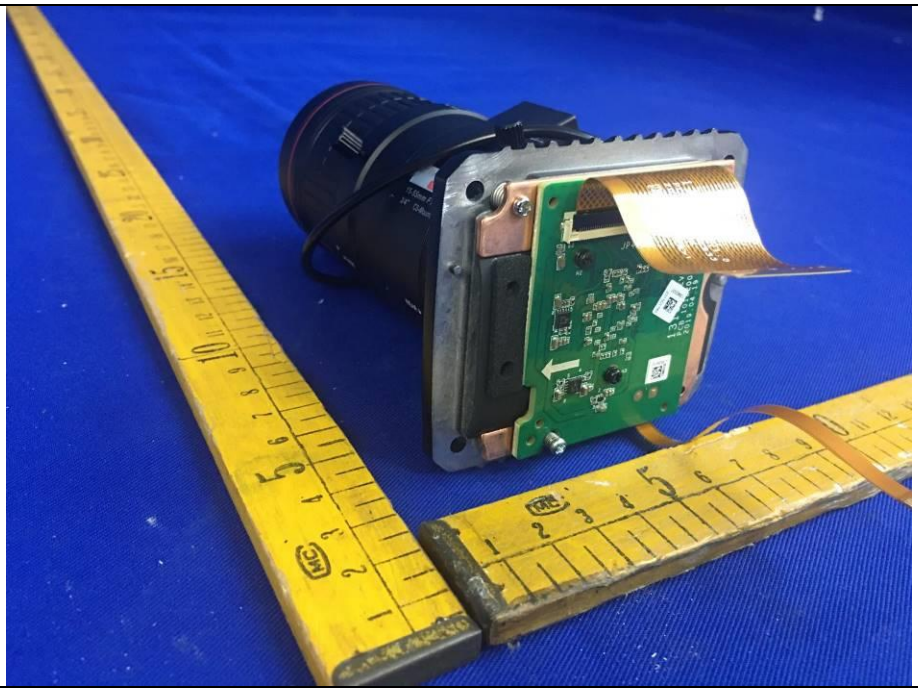


Details of: Internal view (model: iDS-TCV500-BI)

Details of: Internal view (model: iDS-TCV500-BI)



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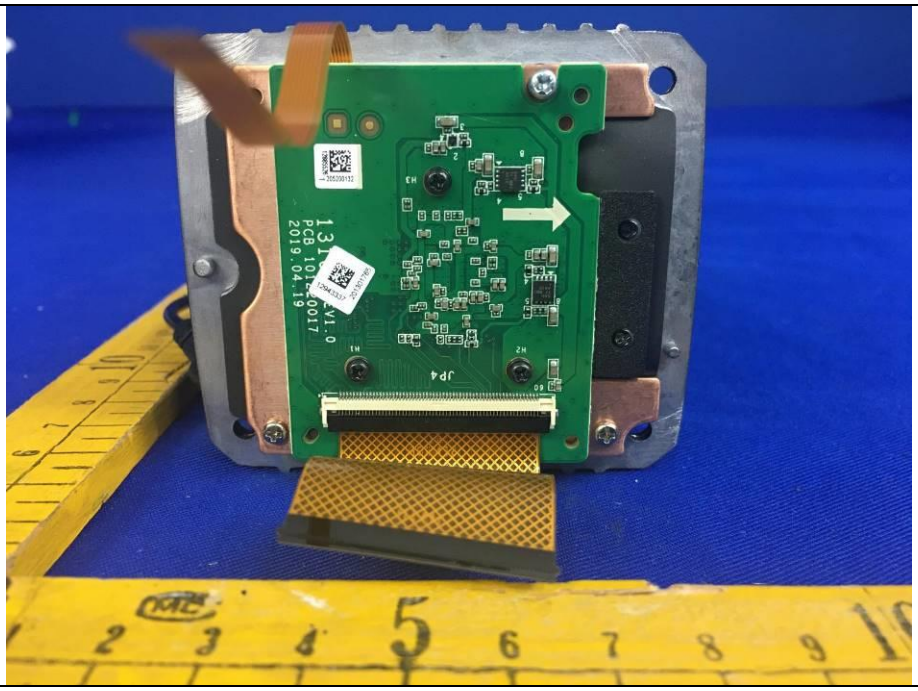

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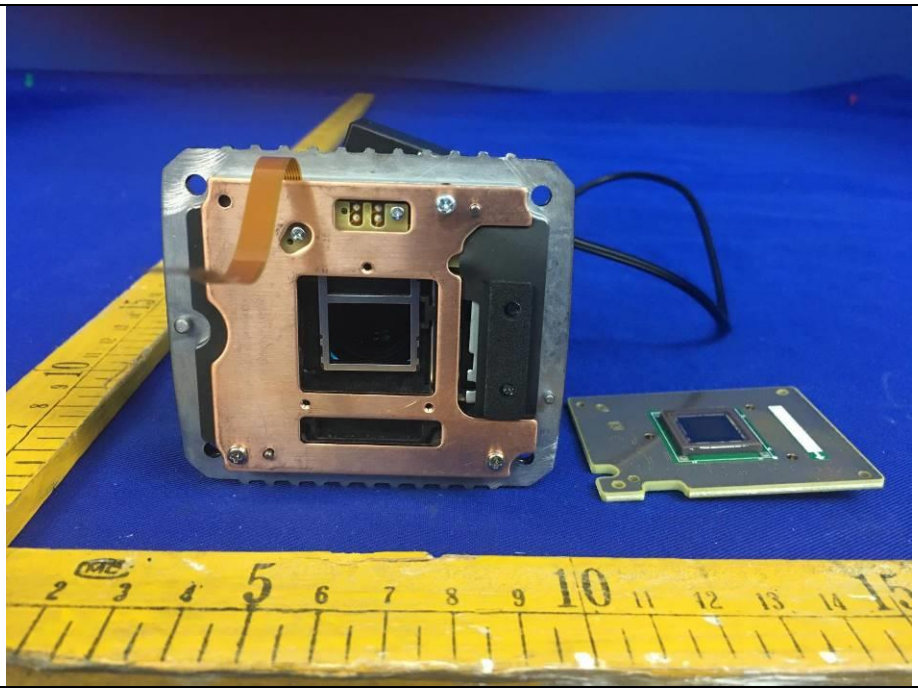
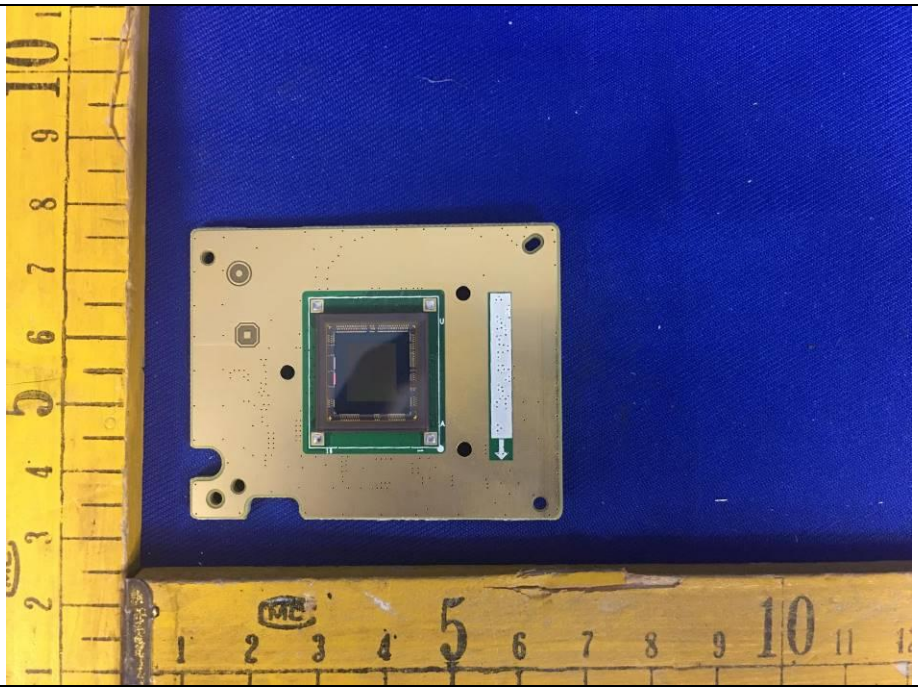
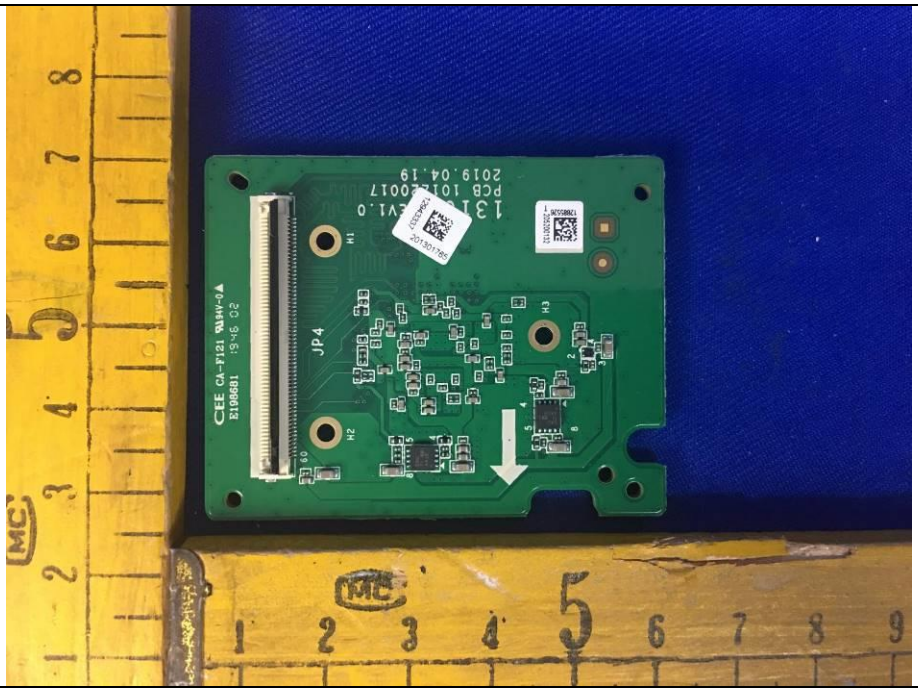


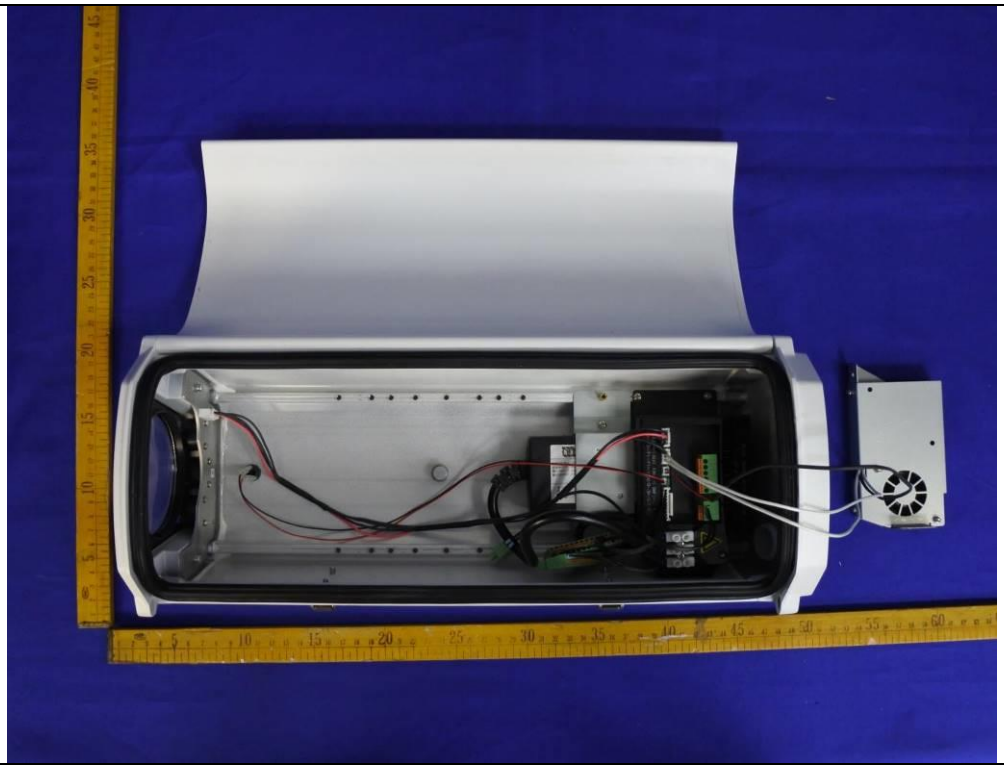
Details of: PCB-3



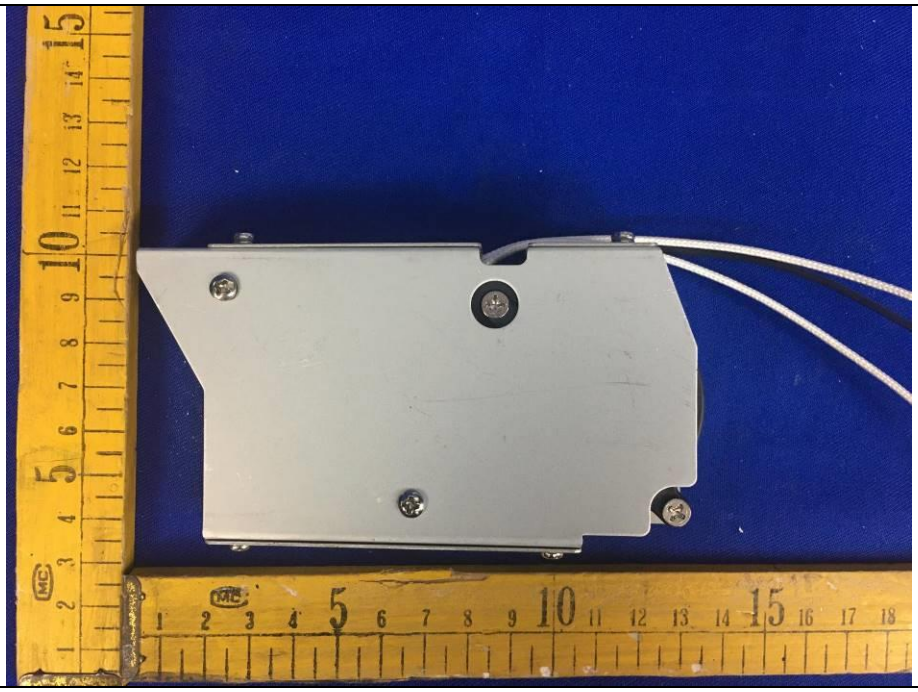
Details of: PCB-3



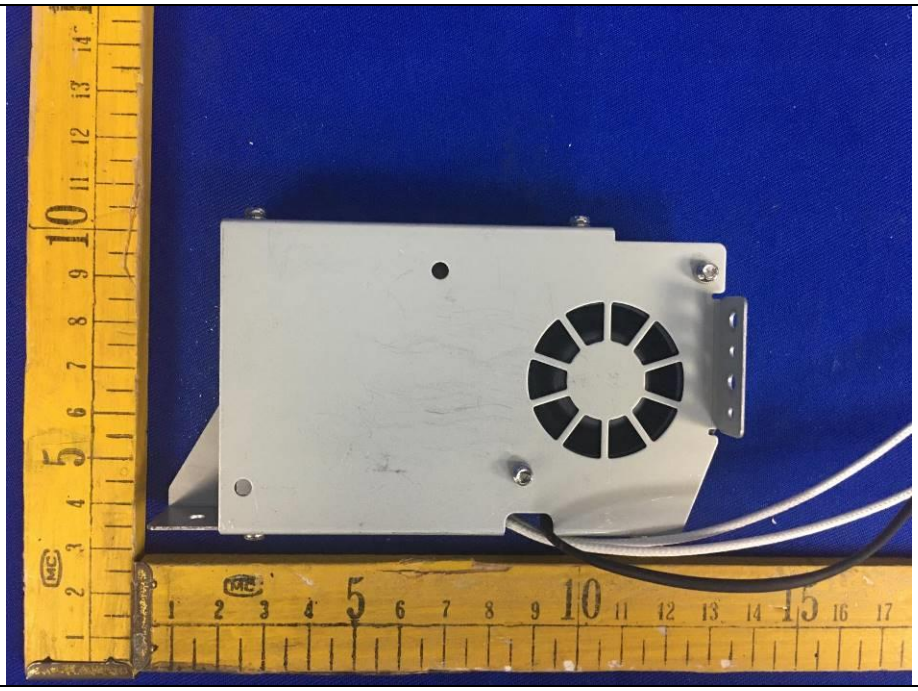
Details of: Internal view (model: iDS-TCV500-BI)



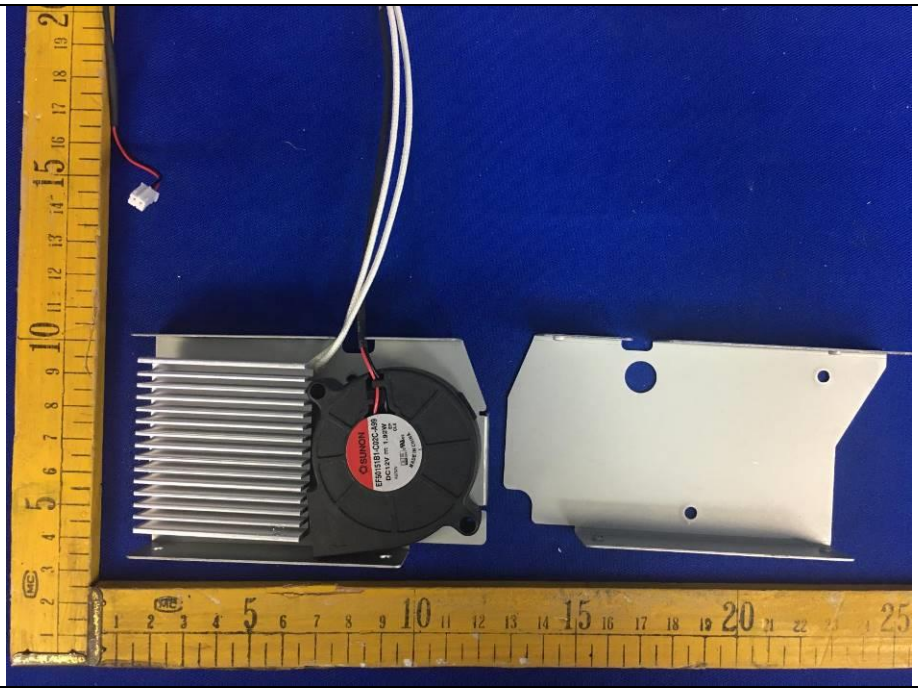
Details of: DC Fan



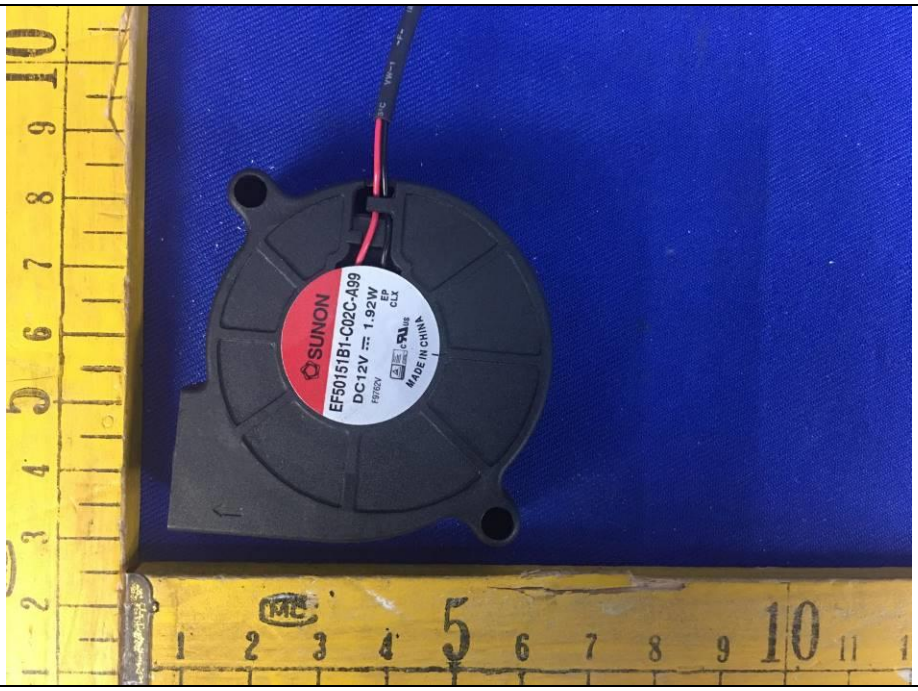
Details of: DC Fan



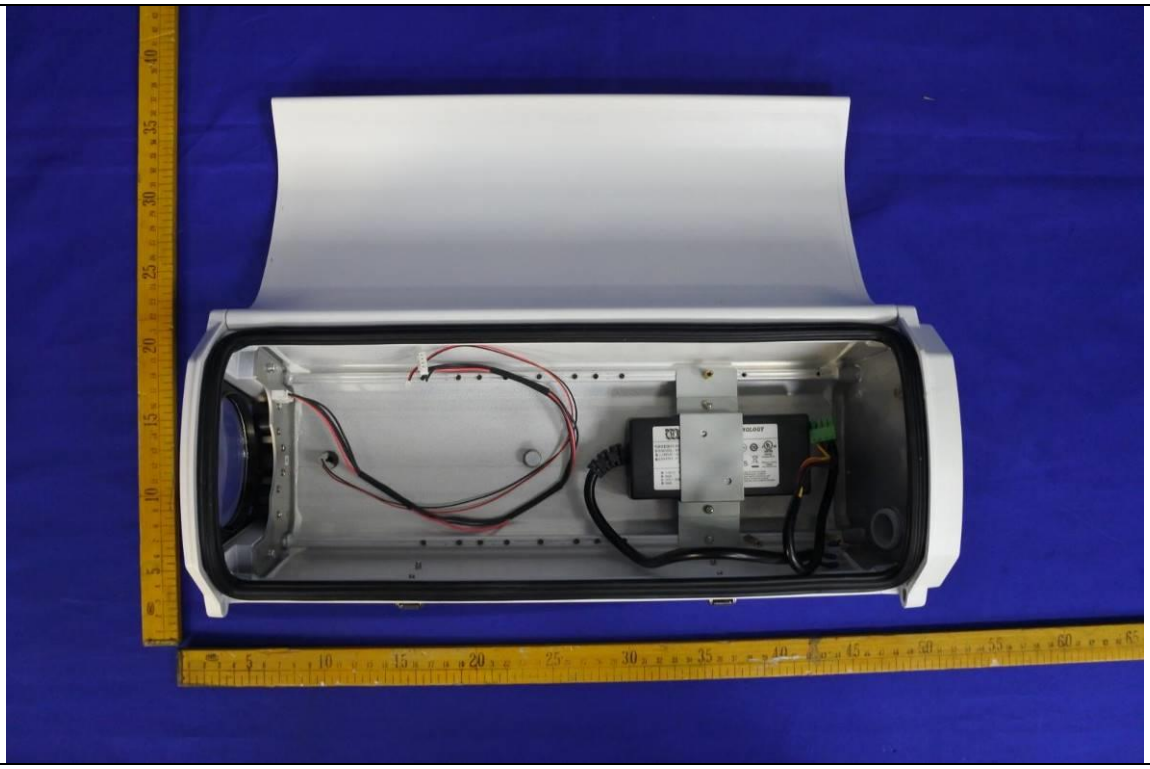
Details of: DC Fan



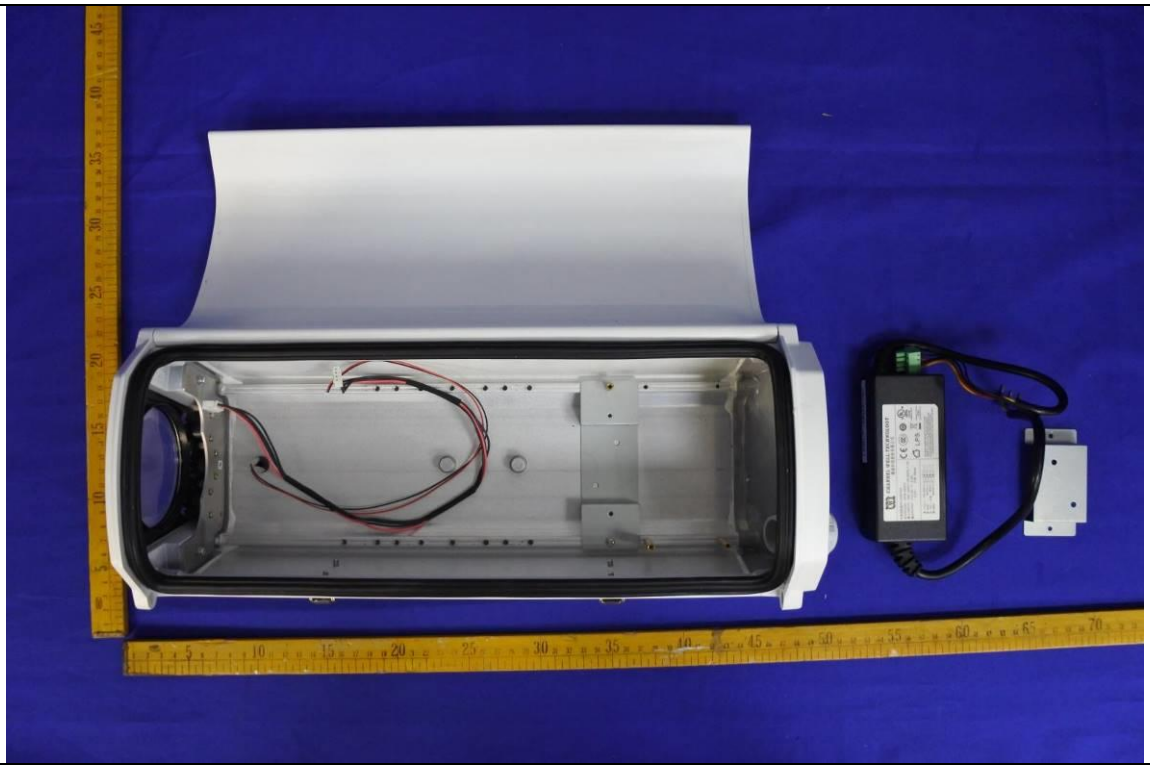
Details of: DC fan



Details of: Internal view (model: iDS-TCV500-BI)



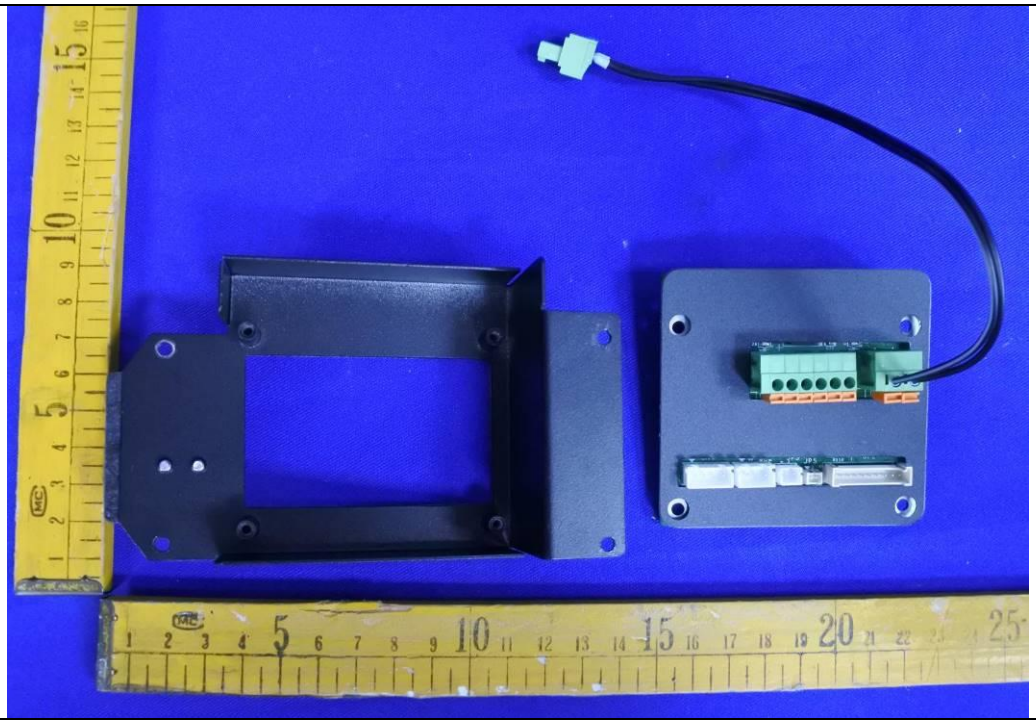
Details of: Internal view (model: iDS-TCV500-BI)



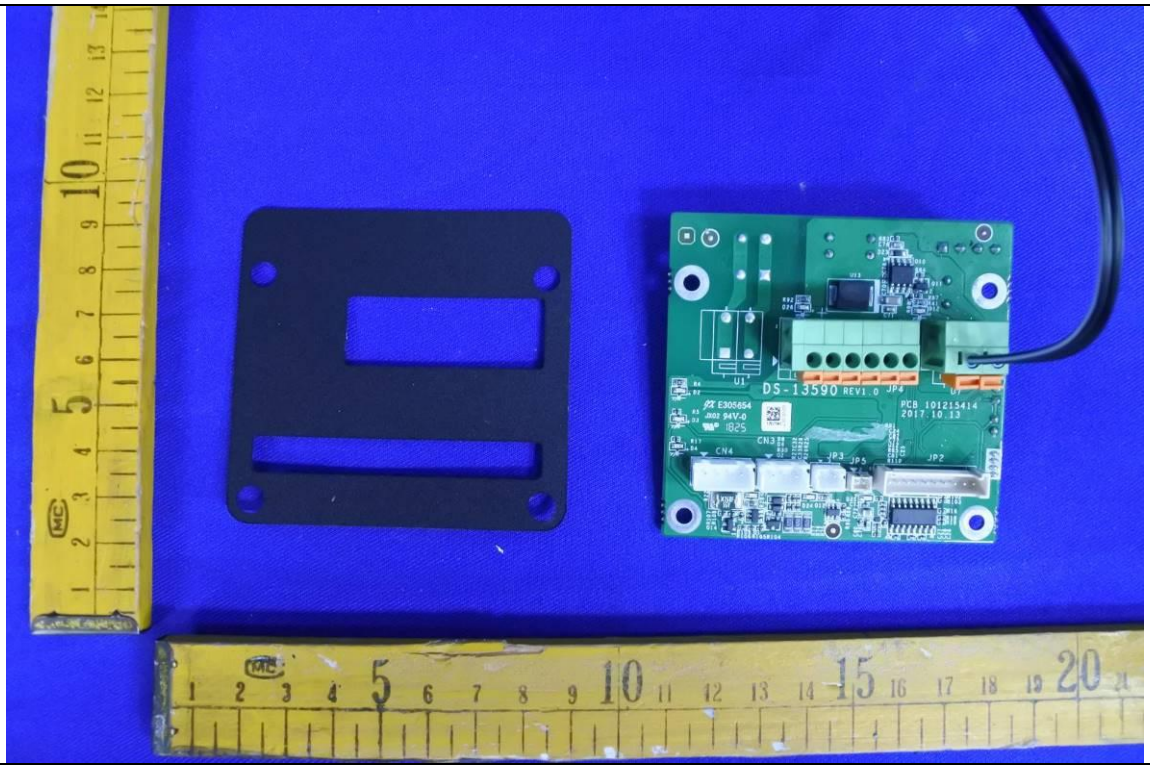
Details of: Power adapter (model: KPB-060F2)

Details of: Internal view (model: iDS-TCV500-BI)

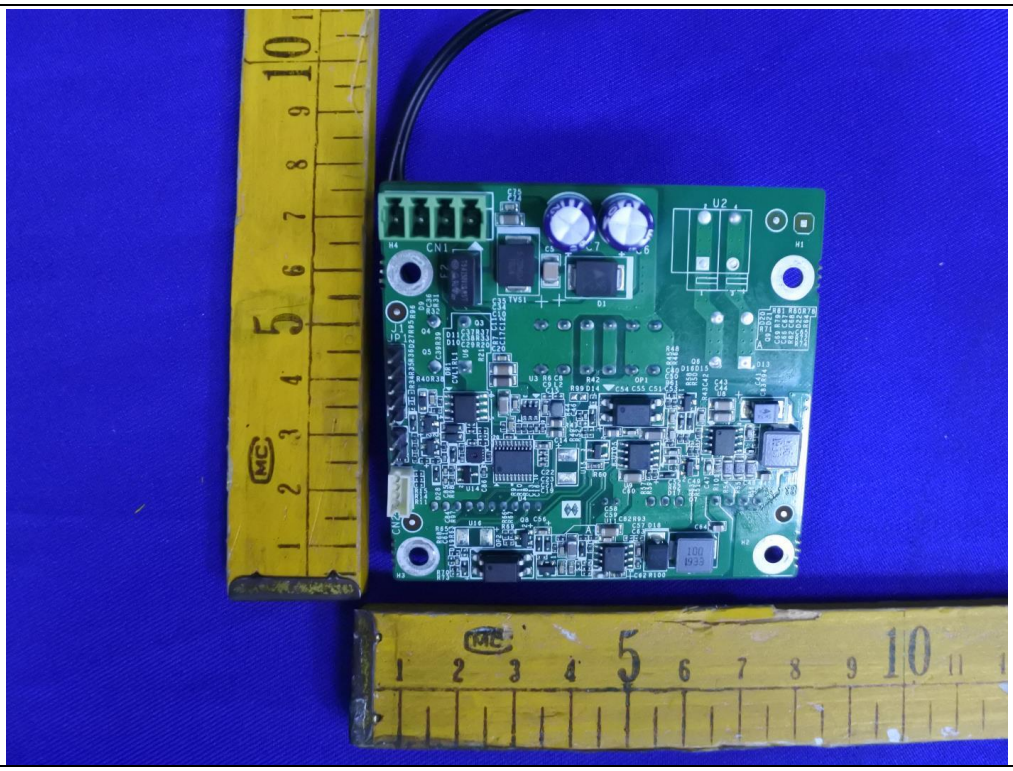
Details of: Internal view (model: iDS-TCV500-BI)



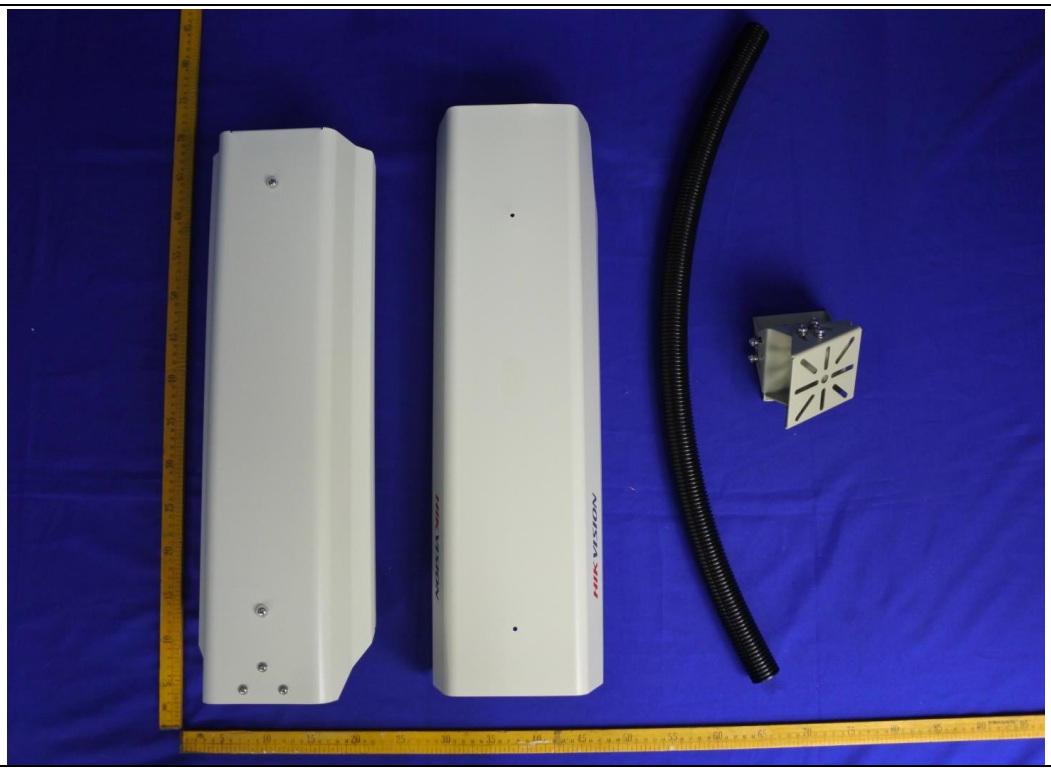
Details of: PCB -4



Details of: PCB -4

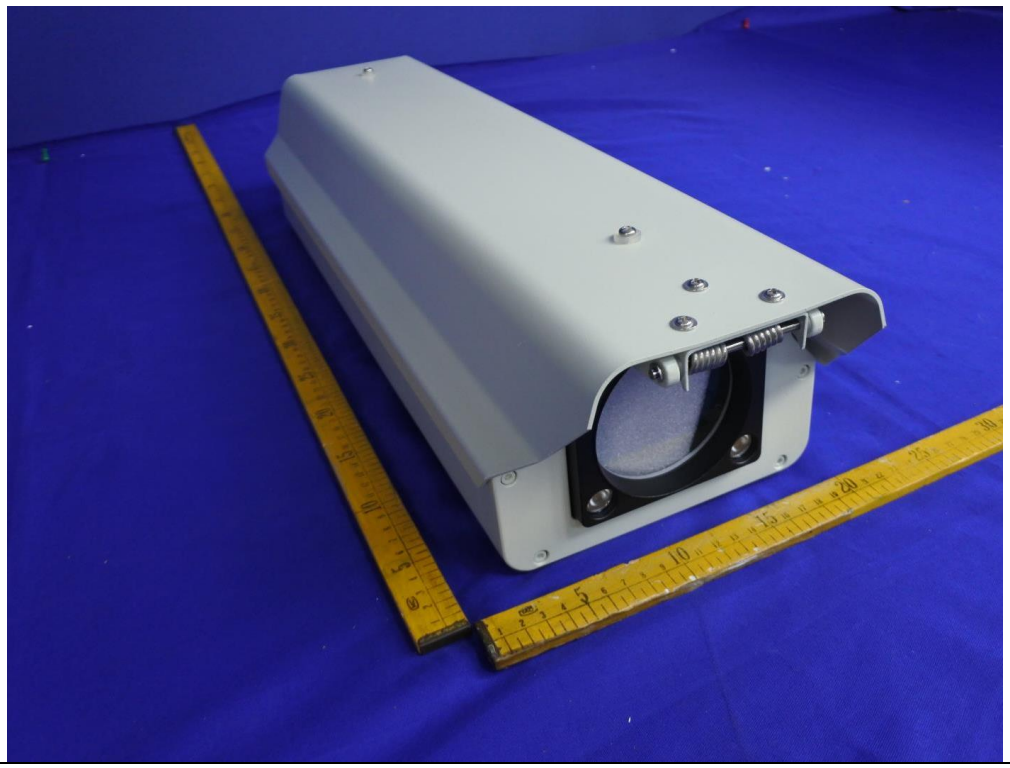


Details of: General view (model: iDS-TCE900-B)

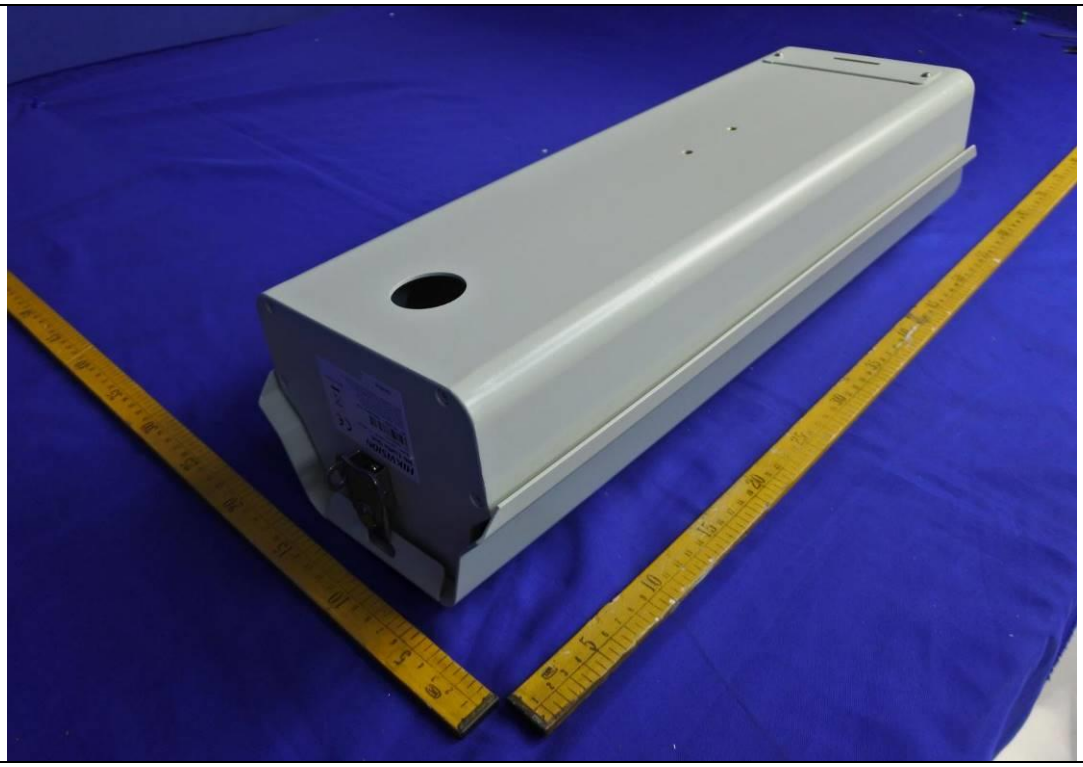


Details of: General view (model: iDS-TCE900-B)

Details of: General view (model: iDS-TCE900-B)

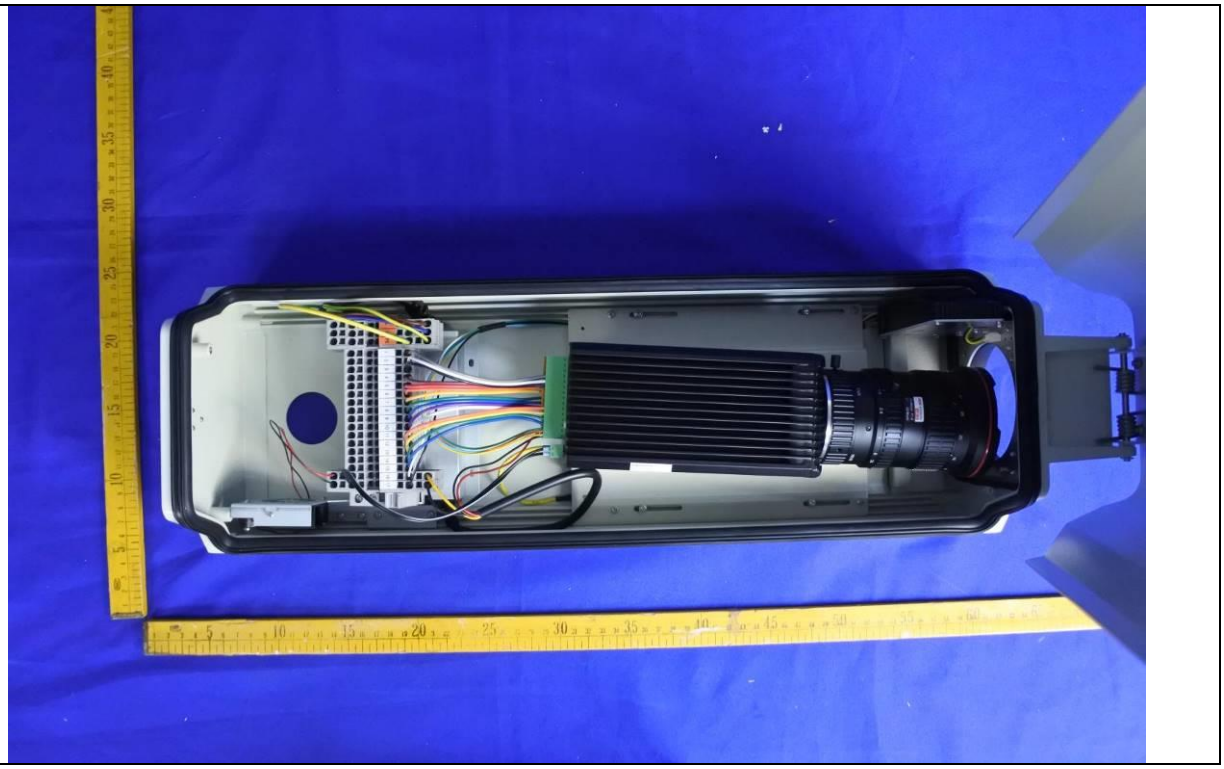


Details of: General view (model: iDS-TCE900-B)

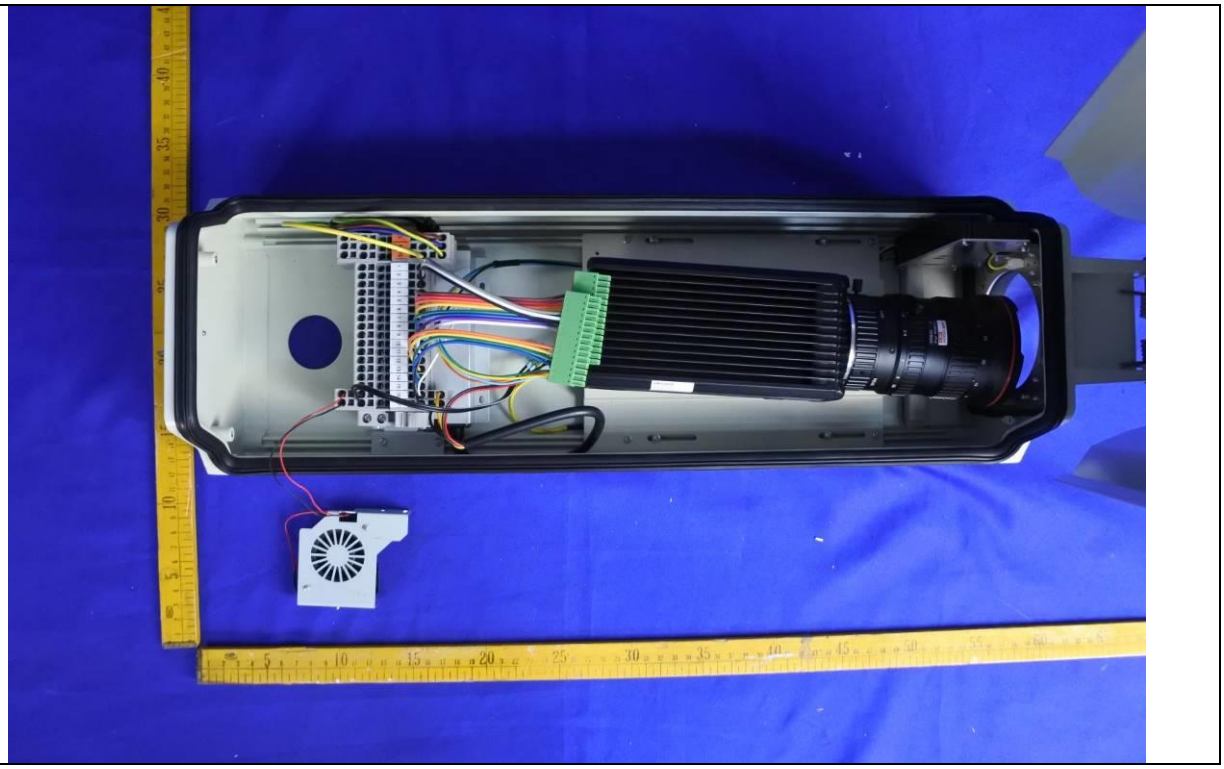


Details of: Internal view (model: iDS-TCE900-B)

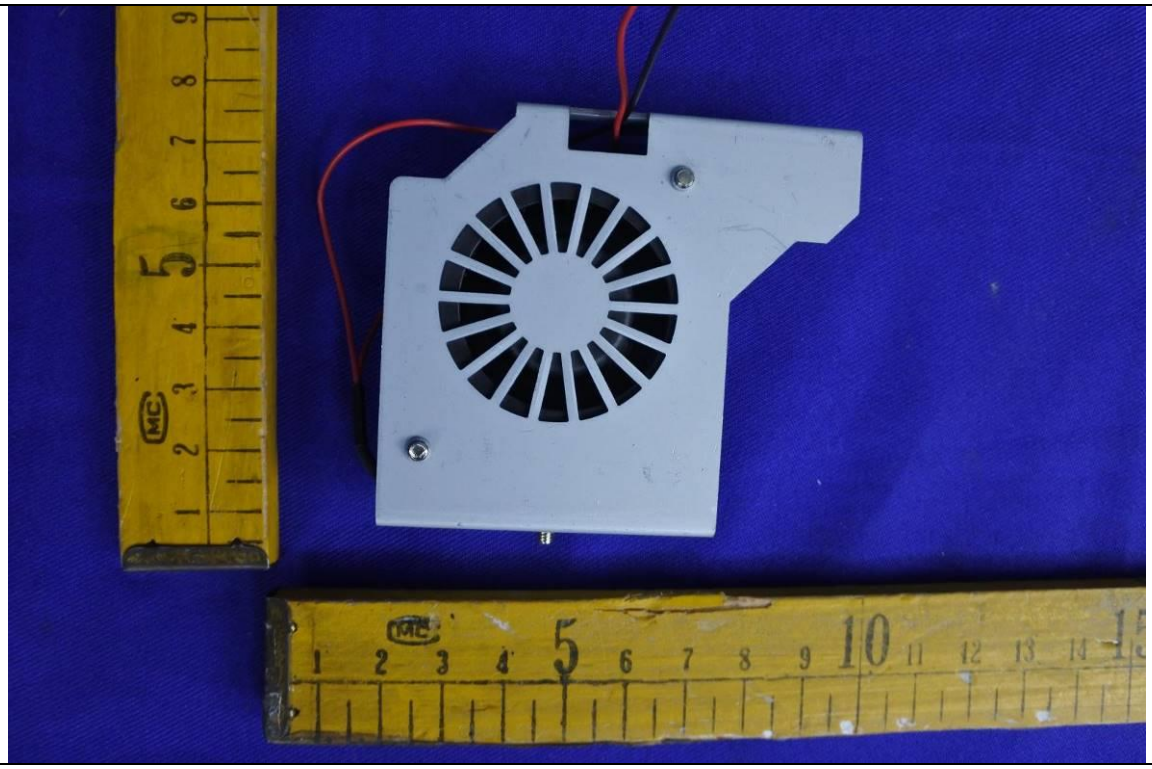
Details of: Internal view (model: iDS-TCE900-B)



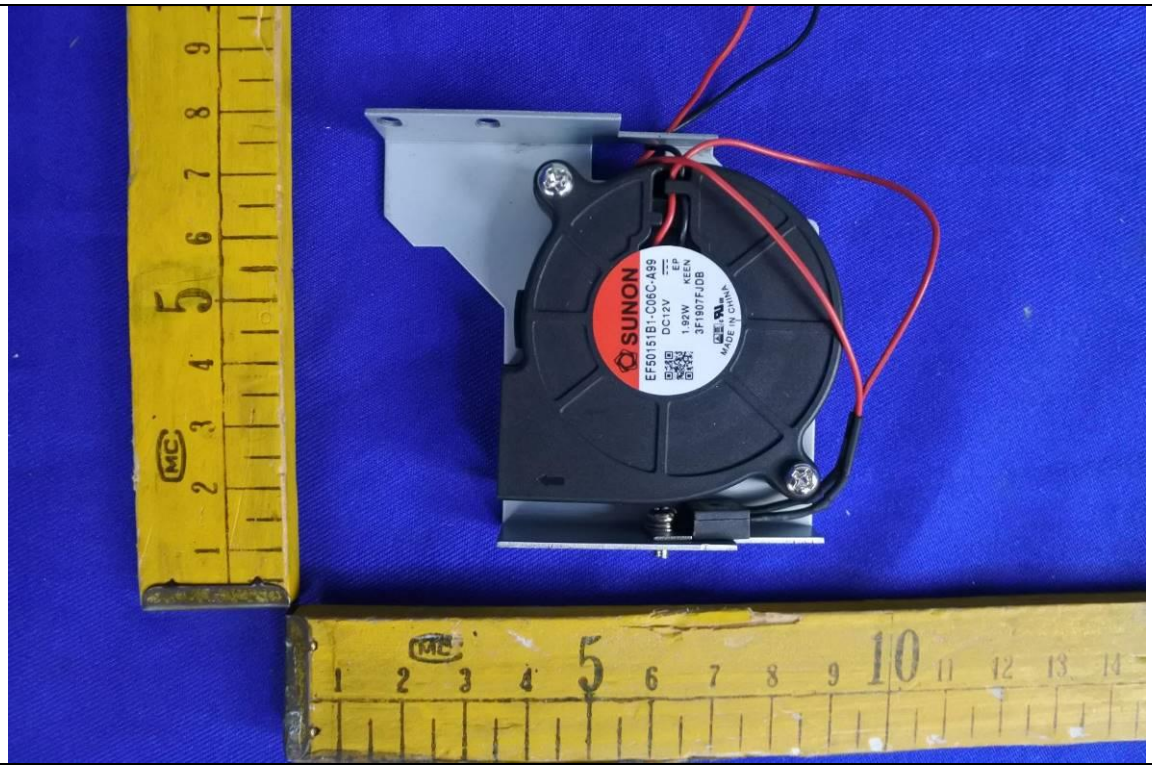
Details of: Internal view (model: iDS-TCE900-B)



Details of: DC Fan



Details of: DC Fan



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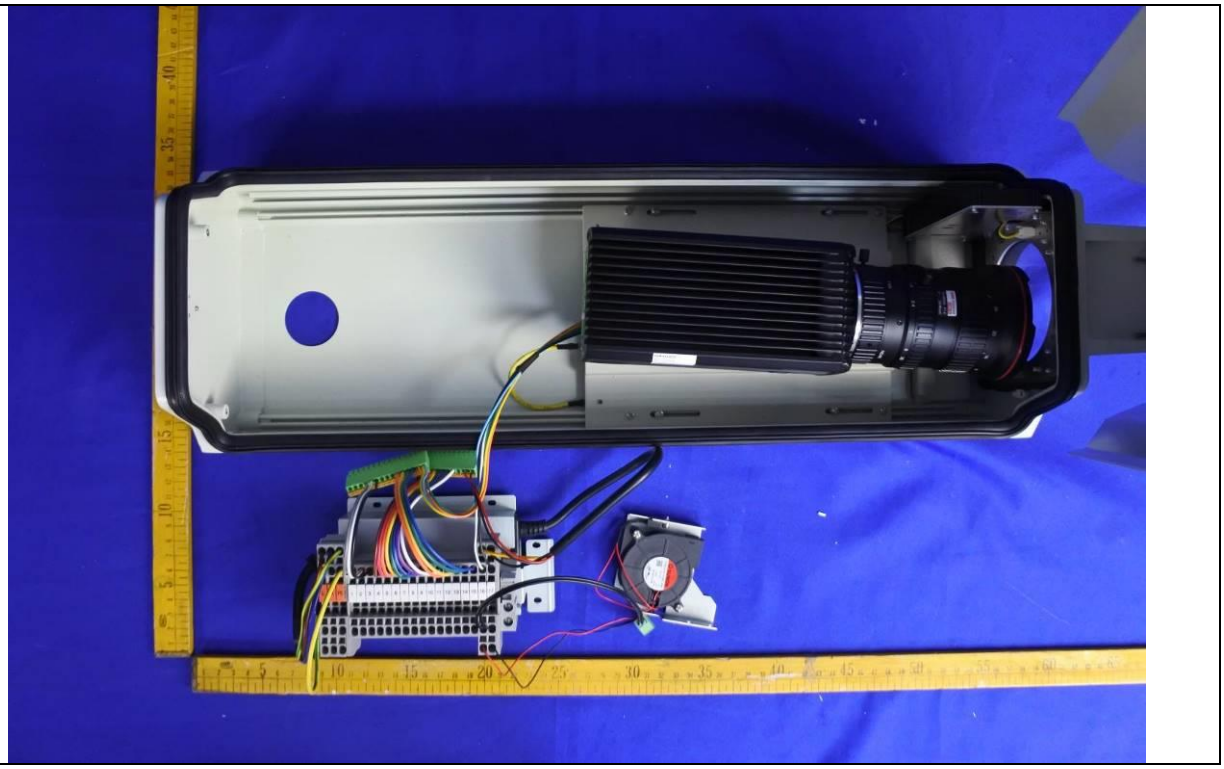
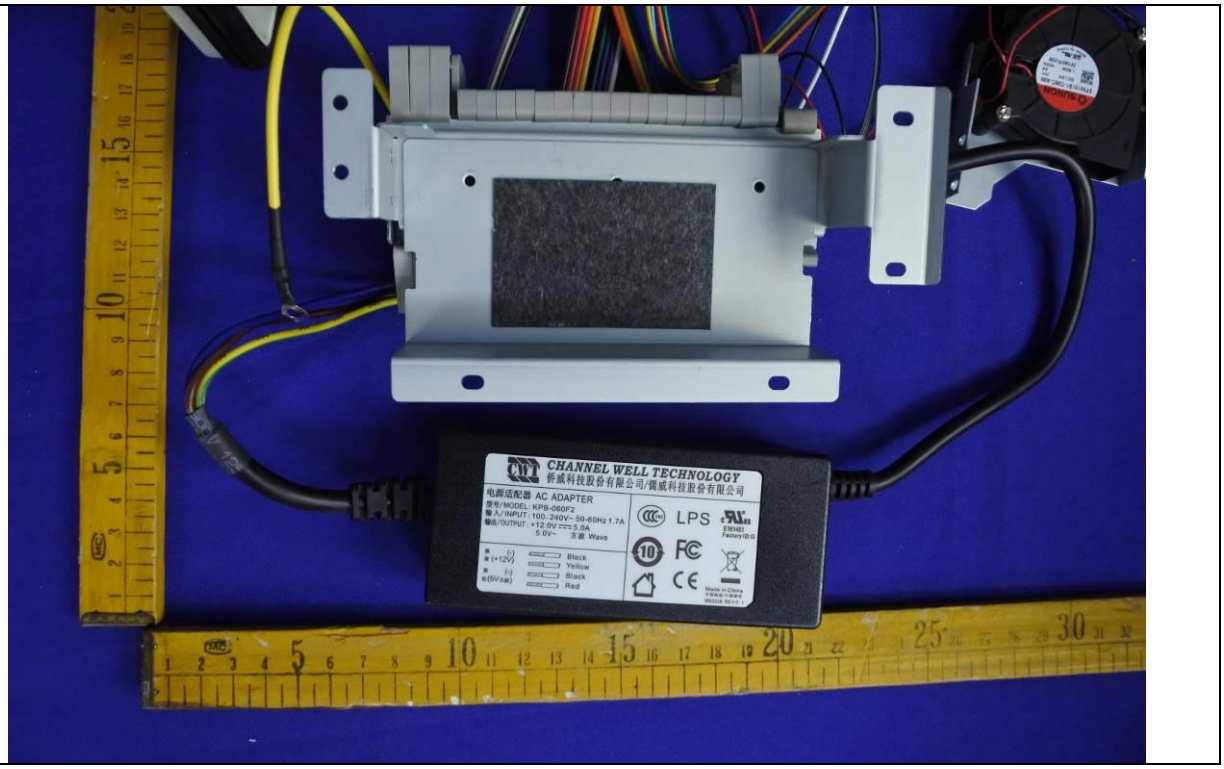


Details of: Power adapter



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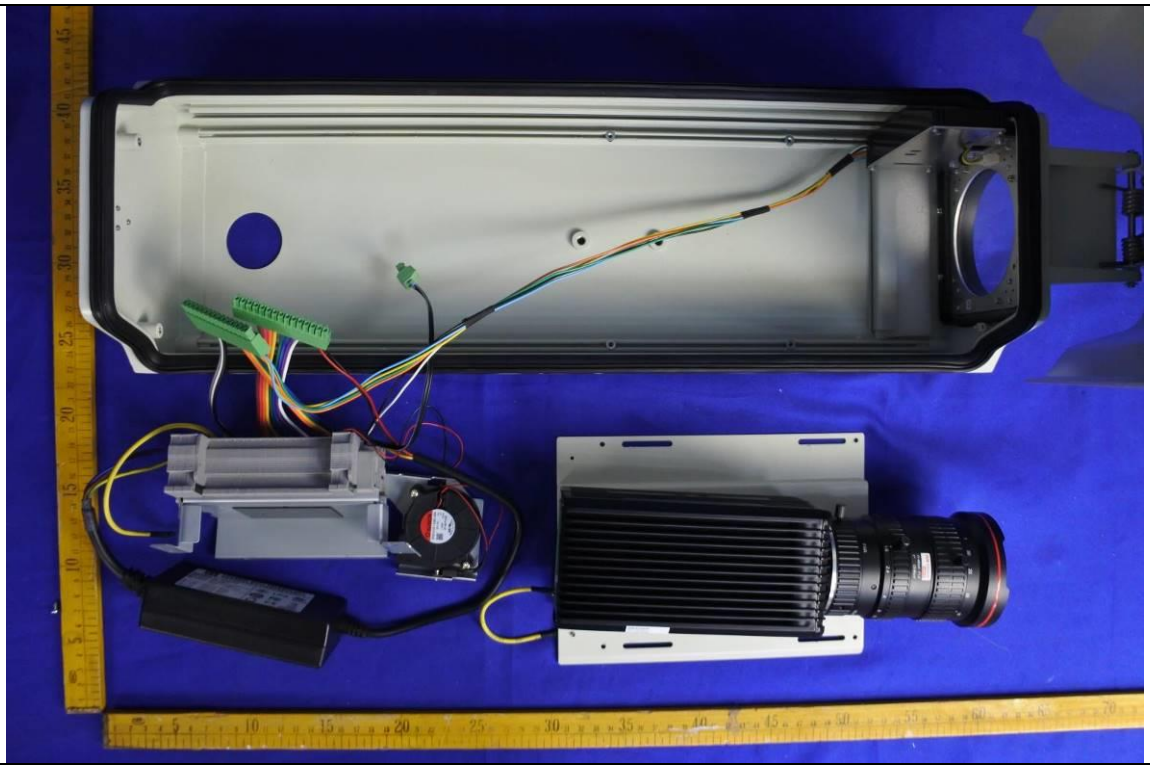
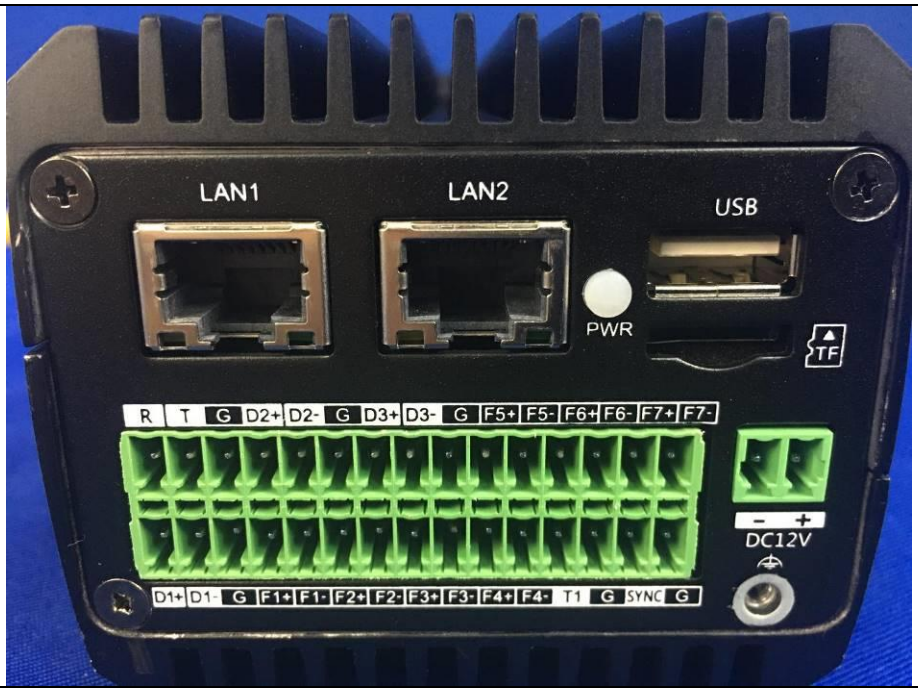


Details of: Internal view (model: iDS-TCE900-B)

Details of: Internal view (model: iDS-TCE900-B)

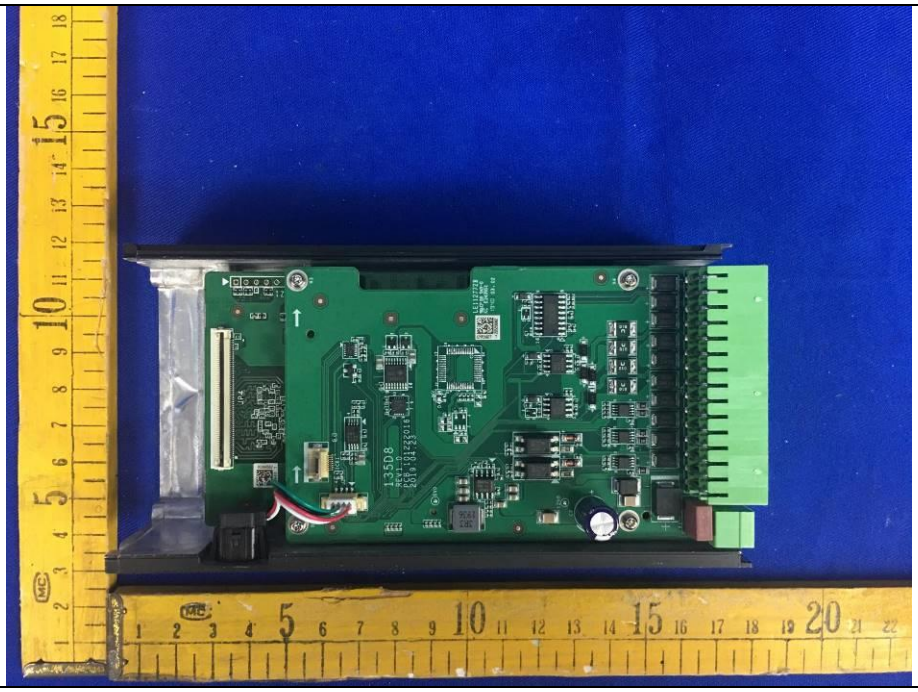
Details of: Internal view (model: iDS-TCE900-B)

Details of: Terminal view (model: iDS-TCE900-B)

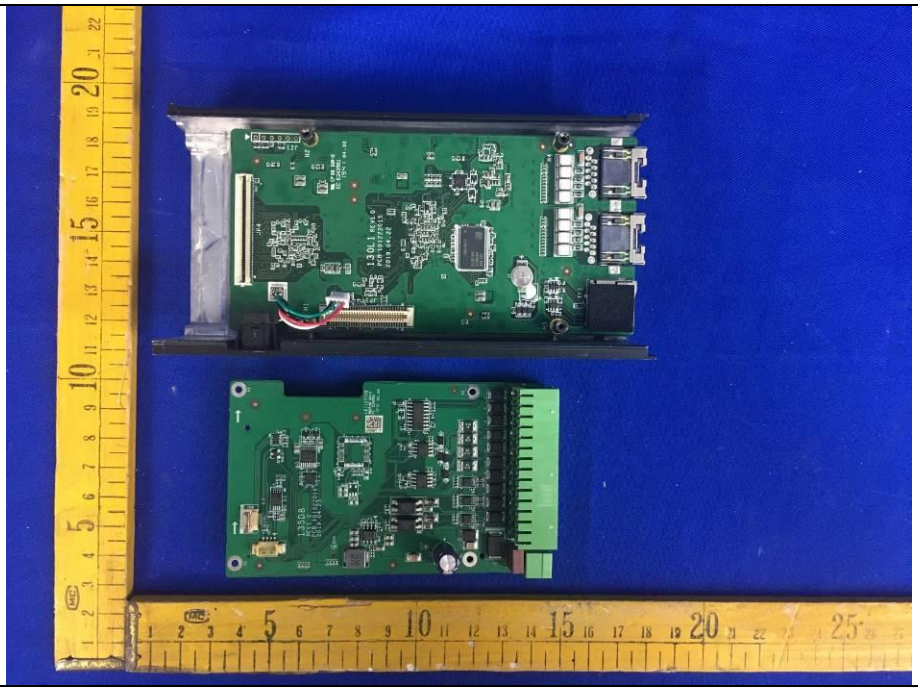


Details of: Internal view (model: iDS-TCE900-B)

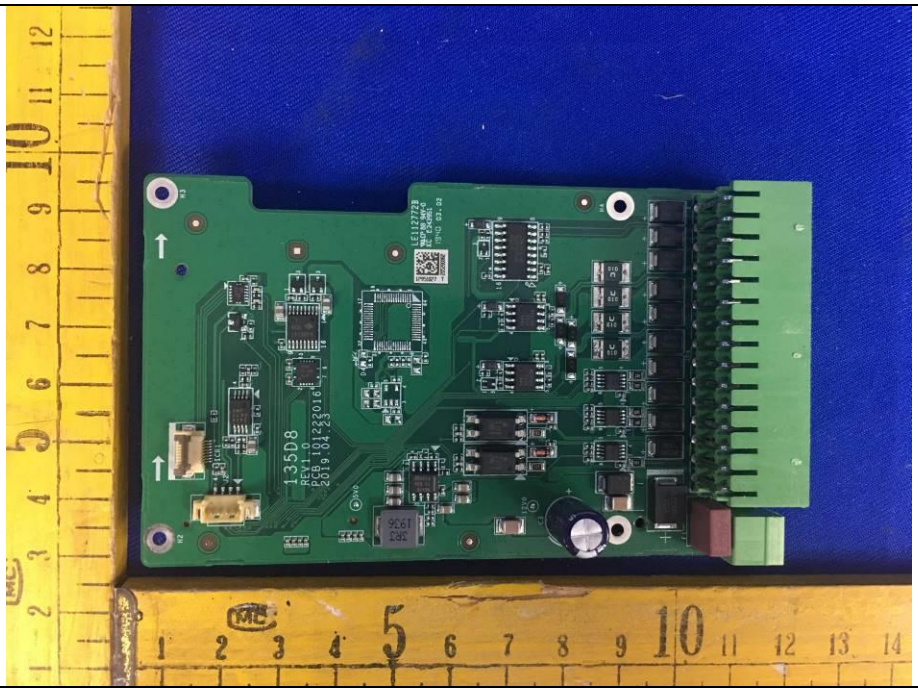
Details of: Internal view (model: iDS-TCE900-B)



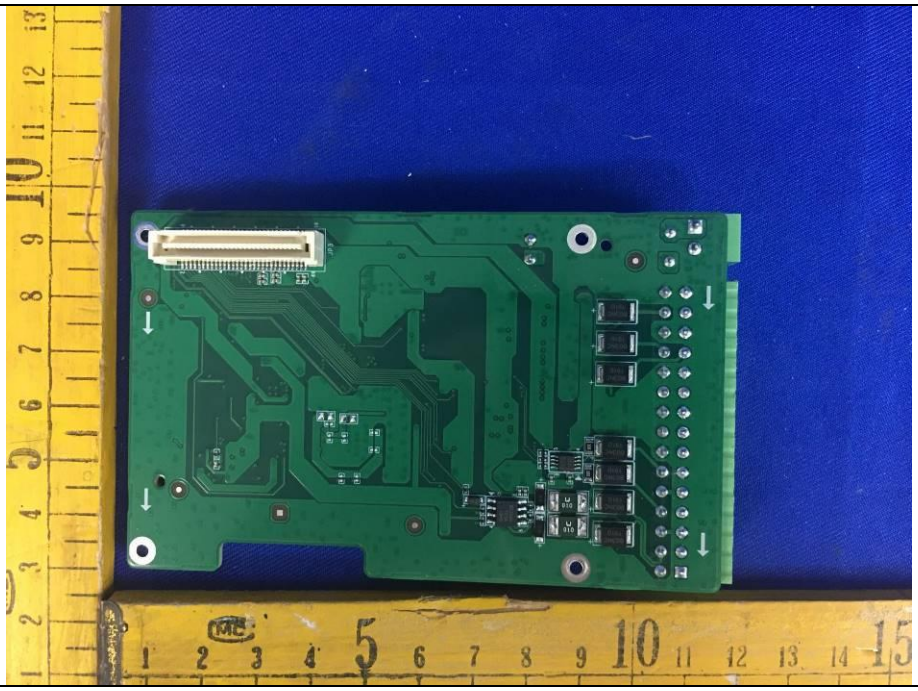
Details of: Internal view (model: iDS-TCE900-B)



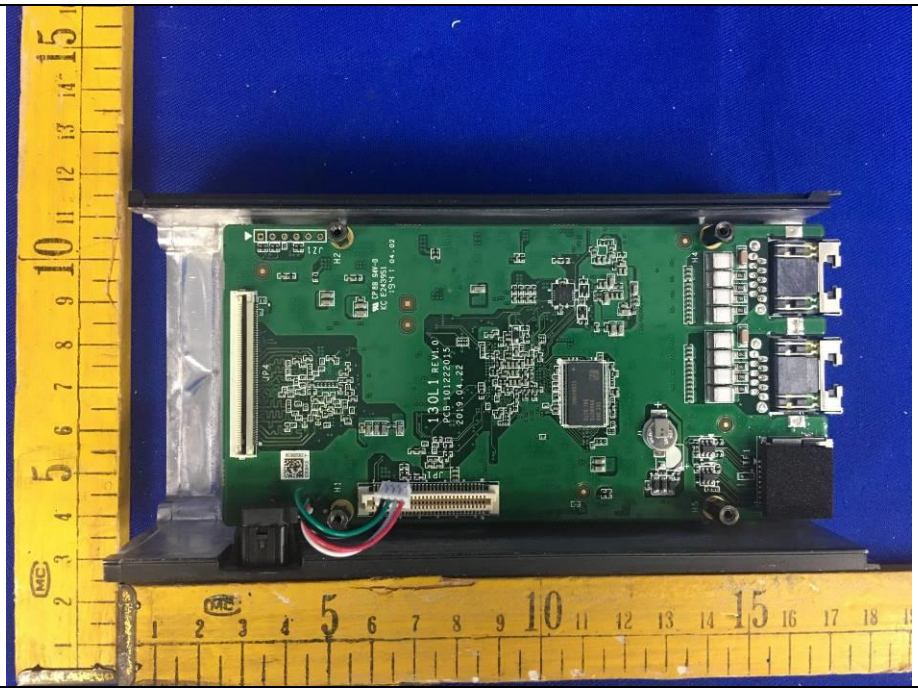
Details of: PCB-1



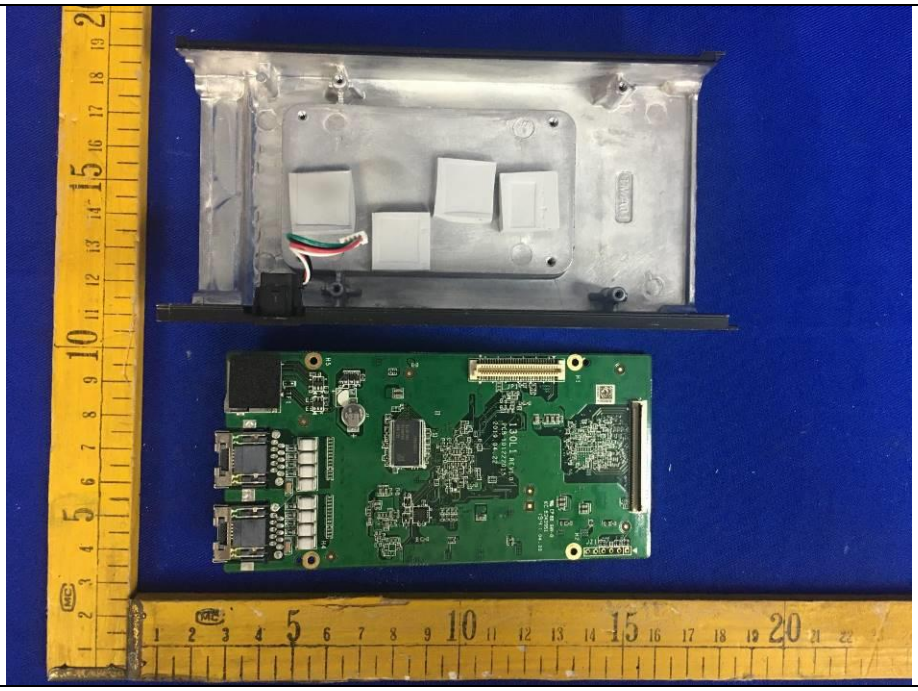
Details of: PCB-1



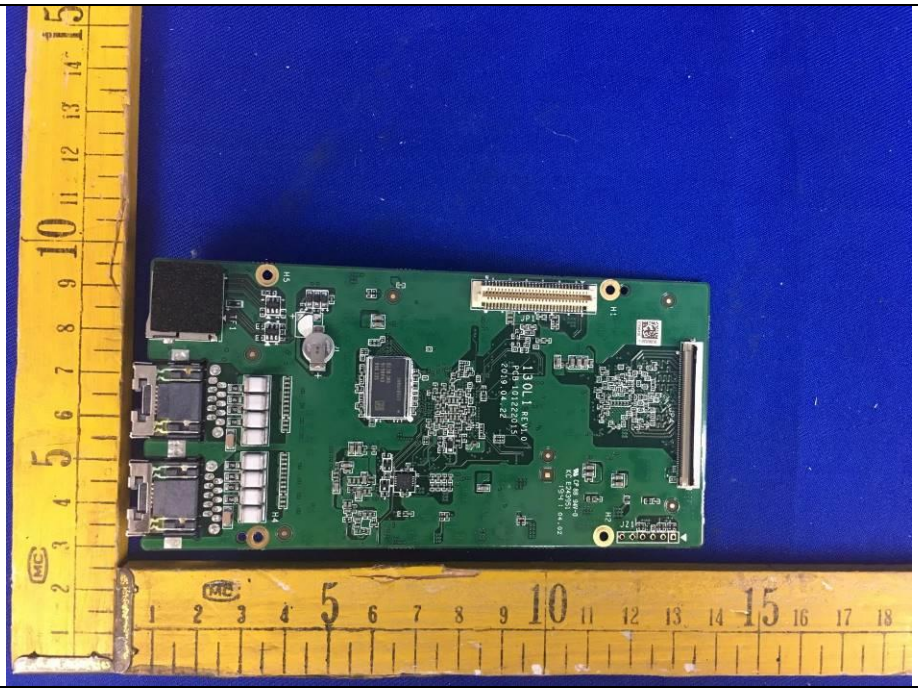
Details of: Internal view (model: iDS-TCE900-B)



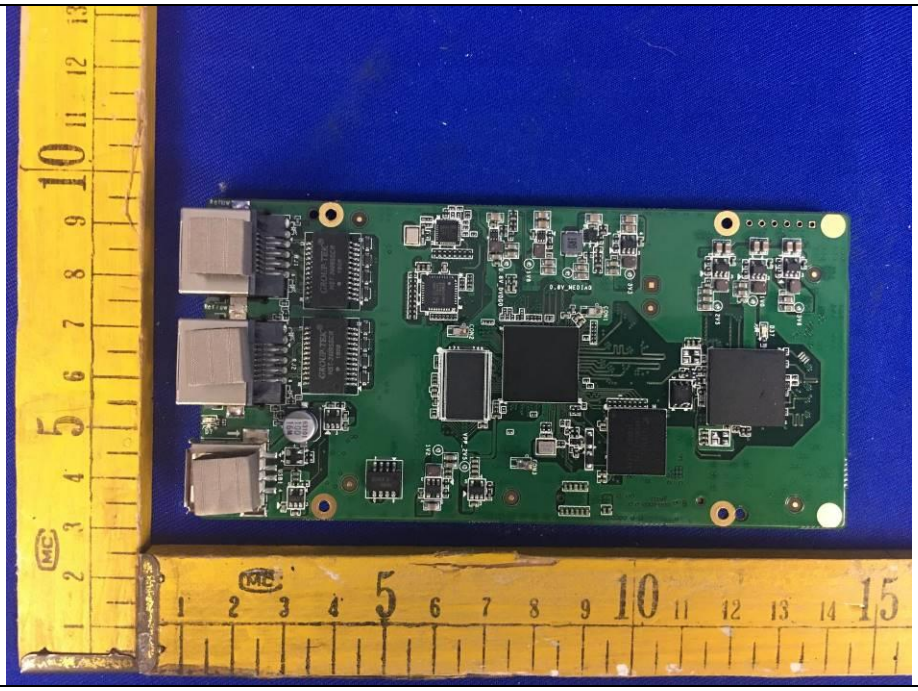
Details of: Internal view (model: iDS-TCE900-B)



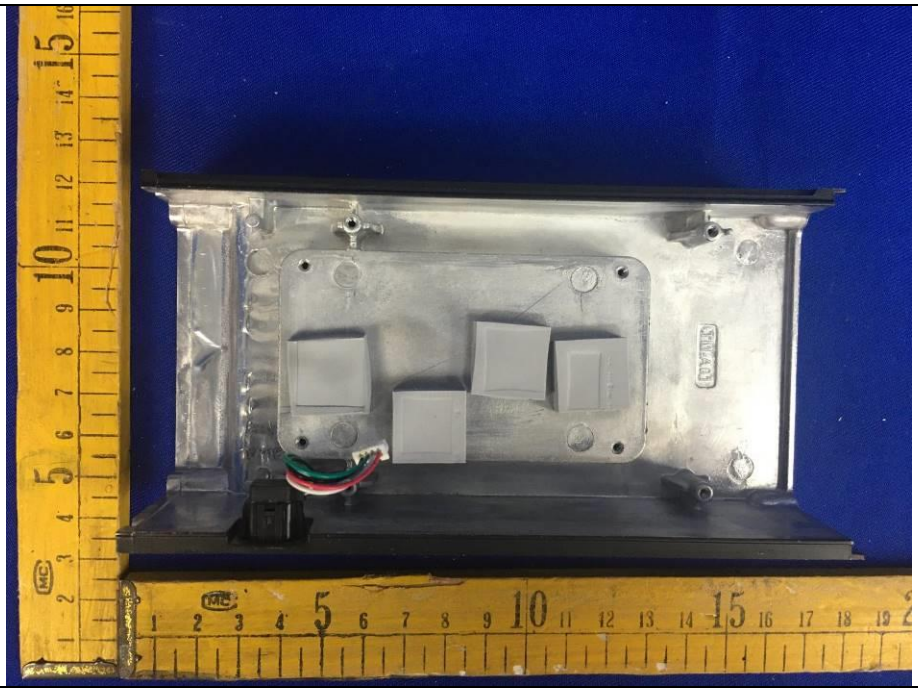
Details of: PCB-2



Details of: PCB-2

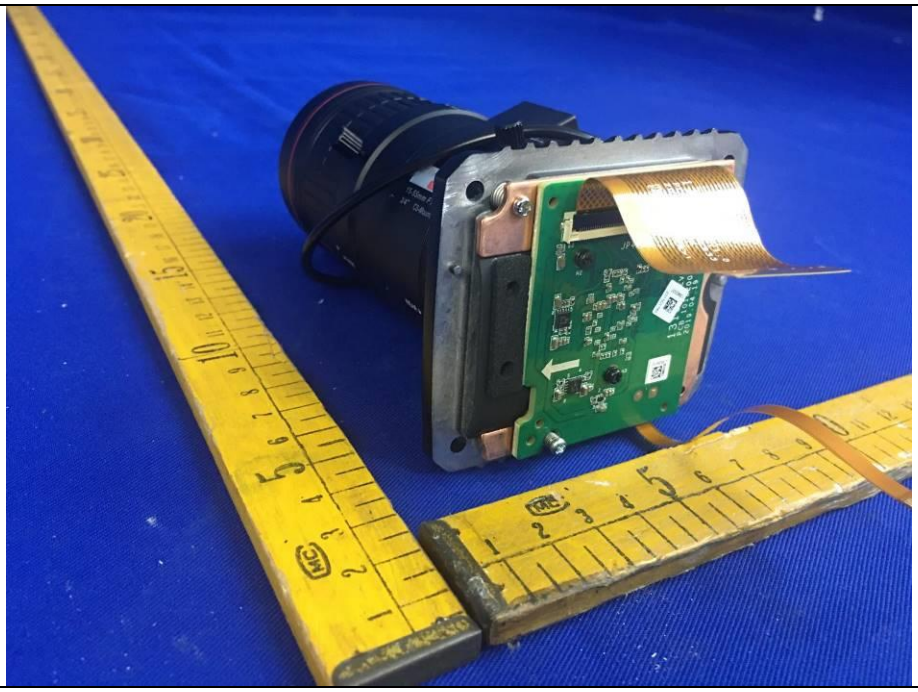


Details of: Internal view (model: iDS-TCE900-B)

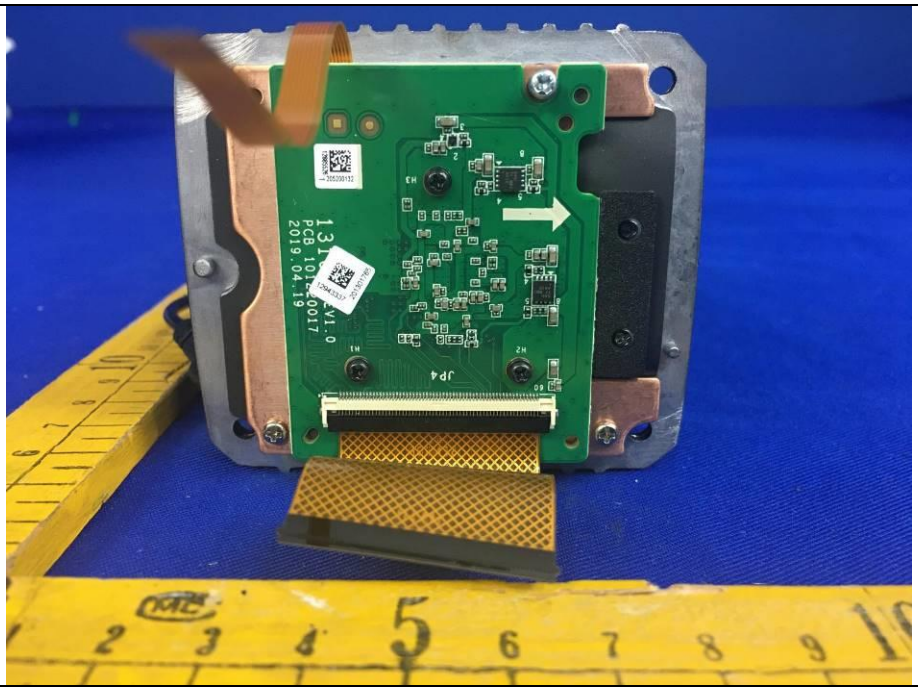


Details of: Internal view (model: iDS-TCE900-B)

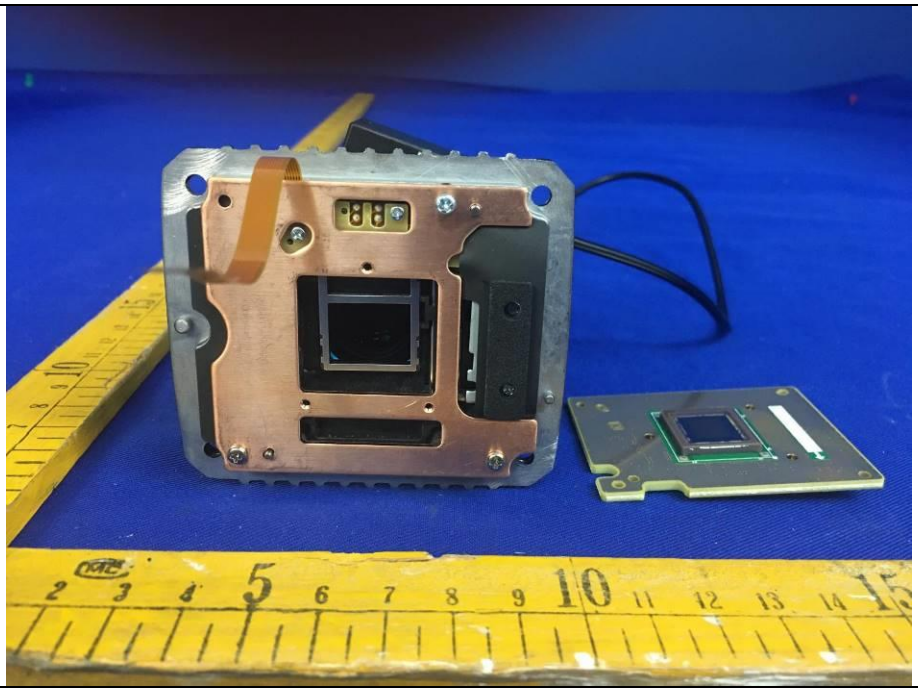
Details of: Internal view (model: iDS-TCE900-B)



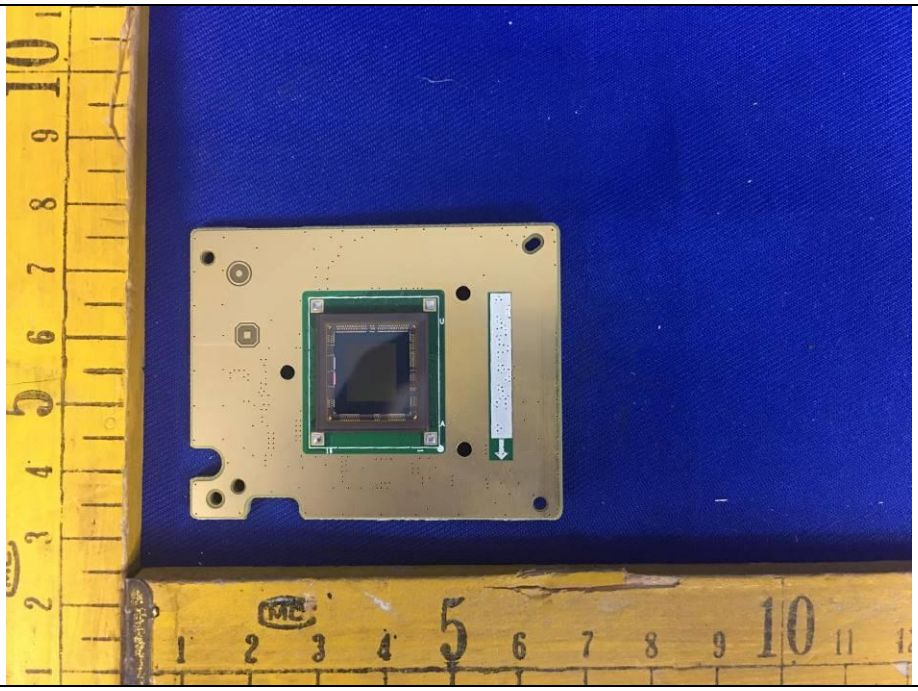
Details of: Internal view (model: iDS-TCE900-B)



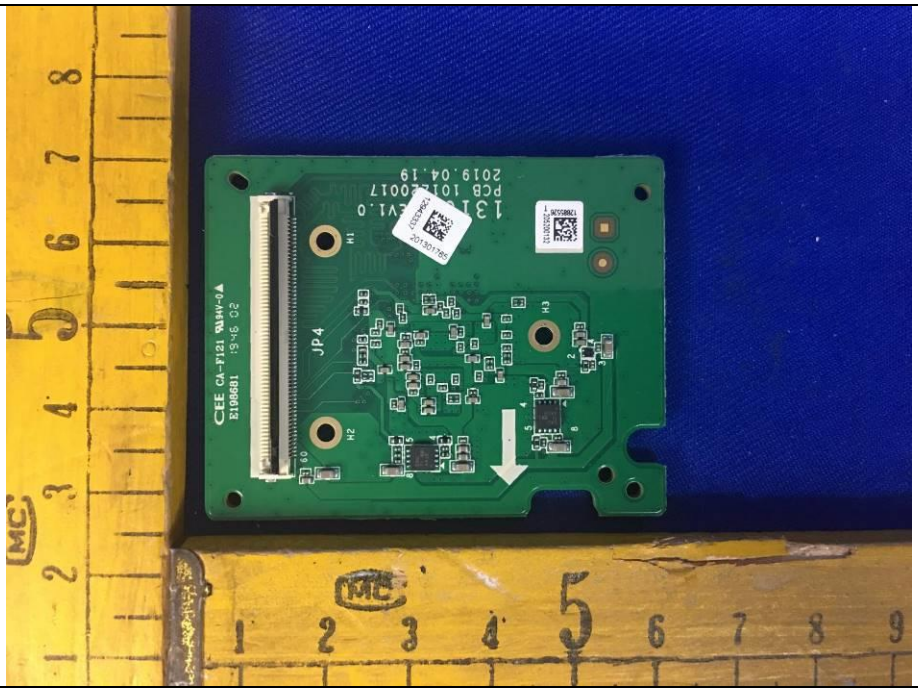
Details of: Internal view (model: iDS-TCE900-B)



Details of: PCB-3



Details of: PCB-3



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

IEC60950_1G - ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict

Attachment 2 EUROPEAN GROUP DIFFERENCES AND NATIONAL DIFFERENCES

ATTACHMENT TO TEST REPORT IEC 60950-1
EUROPEAN GROUP DIFFERENCES AND NATIONAL DIFFERENCES
Information technology equipment – Safety –
Part 1: General requirements

Differences according to.....:	EN 60950-1:2006/A11:2009/A1:2010/A12:2011/A2:2013
Attachment Form No.....:	EU_GD_IEC60950_1G
Attachment Originator.....:	SGS Fimko Ltd
Master Attachment.....:	Date 2014-02

EN 60950-1:2006/A11:2009/A1:2010/A12:2011/A2:2013 – CENELEC COMMON MODIFICATIONS

IEC 60950-1, GROUP DIFFERENCES (CENELEC common modifications EN)			
Clause	Requirement + Test	Result - Remark	Verdict
	Clauses, subclauses, notes, tables and figures which are additional to those in IEC60950-1 and it´s amendmets are prefixed “Z”		
Contents (A2:2013)	Add the following annexes: Annex ZA (normative) Normative references to international publications with their corresponding European publications Annex ZB (normative) Special national conditions Annex ZD (informative) IEC and CENELEC code designations for flexible cords		P
General	Delete all the “country” notes in the reference document (IEC 60950-1:2005) according to the following list: 1.4.8 Note 2; 1.5.1 Note 2 & 3; 1.5.7.1 Note 1.5.8 Note 2; 1.5.9.4 Note; 1.7.2.1 Note 4, 5 & 6 2.2.3 Note; 2.2.4 Note; 2.3.2 Note 2.3.2.1 Note 2; 2.3.4 Note 2; 2.6.3.3 Note 2 & 3 2.7.1 Note; 2.10.3.2 Note 2; 2.10.5.13 Note 3 3.2.1.1 Note; 3.2.4 Note 3.; 2.5.1 Note 2 4.3.6 Note 1 & 2; 4.7 Note 4; 4.7.2.2 Note 4.7.3.1Note 2; 5.1.7.1 Note 3 & 4; 5.3.7 Note 1 6 Note 2 & 5; 6.1.2.1 Note 2; 6.1.2.2 Note 6.2.2 Note; 6.2.2.1 Note 2; 6.2.2.2 Note 7.1 Note 3; 7.2 Note; 7.3 Note 1 & 2 G.2.1 Note 2; Annex H Note 2		P
General (A1:2010)	Delete all the “country” notes in the reference document (IEC 60950-1:2005/A1:2010) according to the following list: 1.5.7.1 Note; 6.1.2.1 Note 2 6.2.2.1 Note 2; EE.3 Note		P

IEC60950_1G - ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict

IEC 60950-1, GROUP DIFFERENCES (CENELEC common modifications EN)			
Clause	Requirement + Test	Result - Remark	Verdict
General (A2:2013)	Delete all the “country” notes in the reference document (IEC 60950-1:2005/A2:2013) according to the following list: 2.7.1 Note * 2.10.3.1 Note 2 6.2.2. Note * Note of secretary: Text of Common Modification remains unchanged.		P
1.1.1 (A1:2010)	**Replace** the text of NOTE 3 by the following. NOTE 3 The requirements of EN 60065 may also be used to meet safety requirements for multimedia equipment. See IEC Guide 112, Guide on the safety of multimedia equipment. For television sets EN 60065 applies.		N/A
1.3.Z1	Add the following subclause: 1.3.Z1 Exposure to excessive sound pressure The apparatus shall be so designed and constructed as to present no danger when used for its intended purpose, either in normal operating conditions or under fault conditions, particularly providing protection against exposure to excessive sound pressures from headphones or earphones. NOTE Z1 A new method of measurement is described in EN 50332-1, Sound system equipment: Headphones and earphones associated with portable audio equipment - Maximum sound pressure level measurement methodology and limit considerations - Part 1: General method for “one package equipment”, and in EN 50332-2, Sound system equipment: Headphones and earphones associated with portable audio equipment - Maximum sound pressure level measurement methodology and limit considerations - Part 2: Guidelines to associate sets with headphones coming from different manufacturers.	Not such equipment.	N/A
(A12:2011)	In EN 60950-1:2006/A12:2011 Delete the addition of 1.3.Z1 / EN 60950-1:2006 Delete the definition 1.2.3.Z1 / EN 60950-1:2006 /A1:2010		N/A
1.5.1 (Added info*)	Add the following NOTE: NOTE Z1 The use of certain substances in electrical and electronic equipment is restricted within the EU: see Directive 2002/95/EC. New Directive 2011/65/11 *		N/A
1.7.2.1 (A1:2010)	In addition, for a PORTABLE SOUND SYSTEM, the instructions shall include a warning that excessive sound pressure from earphones and headphones can cause hearing loss.	Not such equipment.	N/A
1.7.2.1 (A12.2011)	In EN 60950-1:2006/A12:2011 Delete NOTE Z1 and the addition for Portable Sound System. Add the following clause and annex to the existing standard and amendments.	Not such equipment.	N/A

IEC60950_1G - ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict

IEC 60950-1, GROUP DIFFERENCES (CENELEC common modifications EN)			
Clause	Requirement + Test	Result - Remark	Verdict
	Zx Protection against excessive sound pressure from personal music players		N/A
	Zx.1 General This sub-clause specifies requirements for protection against excessive sound pressure from personal music players that are closely coupled to the ear. It also specifies requirements for earphones and headphones intended for use with personal music players. A personal music player is a portable equipment for personal use, that: – is designed to allow the user to listen to recorded or broadcast sound or video; and – primarily uses headphones or earphones that can be worn in or on or around the ears; and – allows the user to walk around while in use. NOTE 1 Examples are hand-held or body-worn portable CD players, MP3 audio players, mobile phones with MP3 type features, PDA's or similar equipment. A personal music player and earphones or headphones intended to be used with personal music players shall comply with the requirements of this sub-clause. The requirements in this sub-clause are valid for music or video mode only. The requirements do not apply: – while the personal music player is connected to an external amplifier; or – while the headphones or earphones are not used. NOTE 2 An external amplifier is an amplifier which is not part of the personal music player or the listening device, but which is intended to play the music as a standalone music player. The requirements do not apply to: – hearing aid equipment and professional equipment; NOTE 3 Professional equipment is equipment sold through special sales channels. All products sold through normal electronics stores are considered not to be professional equipment.		N/A

IEC60950_1G - ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict

IEC 60950-1, GROUP DIFFERENCES (CENELEC common modifications EN)			
Clause	Requirement + Test	Result - Remark	Verdict
	– analogue personal music players (personal music players without any kind of digital processing of the sound signal) that are brought to the market before the end of 2015. NOTE 4 This exemption has been allowed because this technology is falling out of use and it is expected that within a few years it will no longer exist. This exemption will not be extended to other technologies. For equipment which is clearly designed or intended for use by young children, the limits of EN 71-1 apply.		N/A
	Zx.2 Equipment requirements No safety provision is required for equipment that complies with the following: – equipment provided as a package (personal music player with its listening device), where the acoustic output $L_{Aeq,T}$ is ≤ 85 dBA measured while playing the fixed “programme simulation noise” as described in EN 50332-1; and – a personal music player provided with an analogue electrical output socket for a listening device, where the electrical output is ≤ 27 mV measured as described in EN 50332-2, while playing the fixed “programme simulation noise” as described in EN 50332-1. NOTE 1 Wherever the term acoustic output is used in this clause, the 30 s A-weighted equivalent sound pressure level $L_{Aeq,T}$ is meant. See also Zx.5 and Annex Zx. All other equipment shall: a) protect the user from unintentional acoustic outputs exceeding those mentioned above; and b) have a standard acoustic output level not exceeding those mentioned above, and automatically return to an output level not exceeding those mentioned above when the power is switched off; and		N/A

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Clause	Requirement + Test	Result - Remark	Verdict

IEC 60950-1, GROUP DIFFERENCES (CENELEC common modifications EN)			
Clause	Requirement + Test	Result - Remark	Verdict
	c) provide a means to actively inform the user of the increased sound pressure when the equipment is operated with an acoustic output exceeding those mentioned above. Any means used shall be acknowledged by the user before activating a mode of operation which allows for an acoustic output exceeding those mentioned above. The acknowledgement does not need to be repeated more than once every 20 h of cumulative listening time; and NOTE 2 Examples of means include visual or audible signals. Action from the user is always required. NOTE 3 The 20 h listening time is the accumulative listening time, independent how often and how long the personal music player has been switched off. d) have a warning as specified in Zx.3; and e) not exceed the following: 1) equipment provided as a package (player with Its listening device), the acoustic output shall be ≤ 100 dBA measured while playing the fixed “programme simulation noise” described in EN 50332-1; and 2) a personal music player provided with an analogue electrical output socket for a listening device, the electrical output shall be ≤ 150 mV measured as described in EN 50332-2, while playing the fixed “programme simulation noise” described in EN 50332-1. For music where the average sound pressure (long term $L_{Aeq,T}$) measured over the duration of the song is lower than the average produced by the programme simulation noise, the warning does not need to be given as long as the average sound pressure of the song is below the basic limit of 85 dBA. In this case T becomes the duration of the song. NOTE 4 Classical music typically has an average sound pressure (long term $L_{Aeq,T}$) which is much lower than the average programme simulation noise. Therefore, if the player is capable to analyse the song and compare it with the programme simulation noise, the warning does not need to be given as long as the average sound pressure of the song is below the basic limit of 85 dBA. For example, if the player is set with the programme simulation noise to 85 dBA, but the average music level of the song is only 65 dBA, there is no need to give a warning or ask an acknowledgement as long as the average sound level of the song is not above the basic limit of 85 dBA.		N/A

IEC60950_1G - ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict

IEC 60950-1, GROUP DIFFERENCES (CENELEC common modifications EN)			
Clause	Requirement + Test	Result - Remark	Verdict
	Zx.3 Warning The warning shall be placed on the equipment, or on the packaging, or in the instruction manual and shall consist of the following: – the symbol of Figure 1 with a minimum height of 5 mm; and – the following wording, or similar: “To prevent possible hearing damage, do not listen at high volume levels for long periods.”  **Figure 1 – Warning label (IEC 60417-6044)** Alternatively, the entire warning may be given through the equipment display during use, when the user is asked to acknowledge activation of the higher level.		N/A
	Zx.4 Requirements for listening devices (headphones and earphones)		N/A
	Zx.4.1 Wired listening devices with analogue input With 94 dBA sound pressure output $L_{Aeq,T}$, the input voltage of the fixed “programme simulation noise” described in EN 50332-2 shall be ≥ 75 mV. This requirement is applicable in any mode where the headphones can operate (active or passive), including any available setting (for example built-in volume level control). NOTE The values of 94 dBA – 75 mV correspond with 85dBA – 27 mV and 100 dBA – 150 mV.		N/A

IEC60950_1G - ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict

IEC 60950-1, GROUP DIFFERENCES (CENELEC common modifications EN)			
Clause	Requirement + Test	Result - Remark	Verdict
	Zx.4.2 Wired listening devices with digital input With any playing device playing the fixed "programme simulation noise" described in EN 50332-1 (and respecting the digital interface standards, where a digital interface standard exists that specifies the equivalent acoustic level), the acoustic output $L_{Aeq,T}$ of the listening device shall be ≤ 100 dBA. This requirement is applicable in any mode where the headphones can operate, including any available setting (for example built-in volume level control, additional sound feature like equalization, etc.). NOTE An example of a wired listening device with digital input is a USB headphone.		N/A
	Zx.4.3 Wireless listening devices In wireless mode: – with any playing and transmitting device playing the fixed programme simulation noise described in EN 50332-1; and – respecting the wireless transmission standards, where an air interface standard exists that specifies the equivalent acoustic level; and – with volume and sound settings in the listening device (for example built-in volume level control, additional sound feature like equalization, etc.) set to the combination of positions that maximize the measured acoustic output for the abovementioned programme simulation noise, the acoustic output $L_{Aeq,T}$ of the listening device shall be ≤ 100 dBA. NOTE An example of a wireless listening device is a Bluetooth headphone.		N/A
	Zx.5 Measurement methods Measurements shall be made in accordance with EN 50332-1 or EN 50332-2 as applicable. Unless stated otherwise, the time interval T shall be 30 s. NOTE Test method for wireless equipment provided without listening device should be defined.		N/A

IEC60950_1G - ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict

IEC 60950-1, GROUP DIFFERENCES (CENELEC common modifications EN)			
Clause	Requirement + Test	Result - Remark	Verdict
2.7.1	Replace the subclause as follows: Basic requirements To protect against excessive current, short-circuits and earth faults in PRIMARY CIRCUITS, 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 5.3 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;	Certified power supply. Protective device provided as part of the equipment.	P
	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.		N/A
2.7.2	This subclause has been declared 'void'.		N/A
3.2.3	Delete the NOTE in Table 3A, and delete also in this table the conduit sizes in parentheses.	Not permanently connected equipment.	N/A
3.2.5.1	Replace "60245 IEC 53" by "H05 RR-F"; "60227 IEC 52" by "H03 VV-F or H03 VVH2-F"; "60227 IEC 53" by "H05 VV-F or H05 VVH2-F2". In Table 3B, replace the first four lines by the following: Up to and including 6 | 0,75 [a)] | Over 6 up to and including 10| (0,75) [b)] 1,0 | Over 10 up to and including 16| (1,0) [c)] 1,5 | In the conditions applicable to Table 3B delete the words "in some countries" in condition [a)]. In NOTE 1, applicable to Table 3B, delete the second sentence.	Power supply cord is not provided.	N/A

IEC60950_1G - ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict

IEC 60950-1, GROUP DIFFERENCES (CENELEC common modifications EN)			
Clause	Requirement + Test	Result - Remark	Verdict
3.2.5.1 (A2:2013)	NOTE Z1 The harmonised code designations corresponding to the IEC cord types are given in Annex ZD		N/A
3.3.4	In Table 3D, delete the fourth line: conductor sizes for 10 to 13 A, and replace with the following: Over 10 up to and including 16 | 1,5 to 2,5 | 1,5 to 4 | Delete the fifth line: conductor sizes for 13 to 16 A	Appliance inlet provided.	N/A
4.3.13.6 (A1:2010)	Replace the existing NOTE by the following: NOTE Z1 Attention is drawn to: 1999/519/EC: Council Recommendation on the limitation of exposure of the general public to electromagnetic fields 0 Hz to 300 GHz, and 2006/25/EC: Directive on the minimum health and safety requirements regarding the exposure of workers to risks arising from physical agents (artifical optical radiation).		N/A
	Standards taking into account mentioned Recommendation and Directive which demonstrate compliance with the applicable EU Directive are indicated in the OJEC.		N/A
Annex H	Replace the last paragraph of this annex by: At any point 10 cm from the surface of the OPERATOR ACCESS AREA, the dose rate shall not exceed 1 µSv/h (0,1 mR/h) (see NOTE). Account is taken of the background level. Replace the notes as follows: NOTE These values appear in Directive 96/29/Euratom. Delete NOTE 2.	No X-ray radiation.	N/A
Bibliography	Additional EN standards.		—

ZA	**NORMATIVE REFERENCES TO INTERNATIONAL PUBLICATIONS WITH THEIR CORRESPONDING EUROPEAN PUBLICATIONS**	—

ZB ANNEX (normative) **SPECIAL NATIONAL CONDITIONS (EN)**			
Clause	Requirement + Test	Result - Remark	Verdict
1.2.4.1	In **Denmark**, certain types of Class I appliances (see 3.2.1.1) may be provided with a plug not establishing earthing conditions when inserted into Danish socket-outlets.	Power supply cord is not provided.	N/A
1.2.13.14 (A11:2009)	In **Norway** and **Sweden**, for requirements see 1.7.2.1 and 7.3 of this annex.		N/A

IEC60950_1G - ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict

ZB ANNEX (normative) SPECIAL NATIONAL CONDITIONS (EN)			
Clause	Requirement + Test	Result - Remark	Verdict
1.5.7.1 (A11:2009)	In **Finland, Norway** and **Sweden**, resistors bridging BASIC INSULATION in CLASS I PLUGGABLE EQUIPMENT TYPE A must comply with the requirements in 1.5.7.1. In addition when a single resistor is used, the resistor must withstand the resistor test in 1.5.7.2.	No such resistor.	N/A
1.5.8	In **Norway**, due to the IT power system used (see annex V, Figure V.7), capacitors are required to be rated for the applicable line-to-line voltage (230 V).	Suitable capacitor used.	N/A
1.5.9.4	In **Finland**, **Norway** and **Sweden**, the third dashed sentence is applicable only to equipment as defined in 6.1.2.2 of this annex.		N/A

IEC60950_1G - ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict

ZB ANNEX (normative) SPECIAL NATIONAL CONDITIONS (EN)			
Clause	Requirement + Test	Result - Remark	Verdict
1.7.2.1	In **Finland**, **Norway** and **Sweden**, CLASS I PLUGGABLE EQUIPMENT TYPE A intended for connection to other equipment or a network shall, if safety relies on connection to protective earth or if surge suppressors are connected between the network terminals and accessible parts, have a marking stating that the equipment must be connected to an earthed mains socket-outlet. The marking text in the applicable countries shall be as follows: In **Finland**: "Laite on liitettävä suojakoskettimilla varustettuun pistorasiaan" In **Norway**: “Apparatet må tilkoples jordet stikkontakt” In **Sweden**: “Apparaten skall anslutas till jordat uttag”	Should be considered before marketing in those countries.	N/A
1.7.2.1 (A11:2009)	In **Norway** and **Sweden**, the screen of the cable 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 need 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 e.g. a retailer. 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: “Equipment connected to the protective earthing of the building installation through the mains connection or through other equipment with a connection to protective earthing – and to a cable distribution system using coaxial cable, may in some circumstances create a fire hazard. Connection to a cable distribution system has therefore to be provided through a device providing electrical isolation below a certain frequency range (galvanic isolator, see EN 60728-11).”	Not connected to CDS.	

IEC60950_1G - ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict

ZB ANNEX (normative) SPECIAL NATIONAL CONDITIONS (EN)			
Clause	Requirement + Test	Result - Remark	Verdict
	NOTE In Norway, due to regulation for installations of cable distribution systems, 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): “Utstyr som er koplet til beskyttelsesjord via nettplugg og/eller via annet jordtilkoplet utstyr – og er tilkoplet et kabel-TV nett, kan forårsake brannfare. For å unngå dette skal det ved tilkopling av utstyret til kabel-TV nettet installeres en galvanisk isolator mellom utstyret og kabel- TV nettet.” Translation to Swedish: ”Utrustning 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 utrustningen till kabel-TV nät galvanisk isolator finnas mellan utrustningen och kabel-TV nätet.”		N/A
1.7.2.1 (A2:2013)	In **Denmark**, CLASS I PLUGGABLE EQUIPMENT TYPE A intended for connection to other equipment or a network shall, if safety relies on connection to protective earth or if surge suppressors are connected between the network terminals and accessible parts, have a marking stating that the equipment must be connected to an earthed mains socket-outlet. The marking text in **Denmark** shall be as follows: In **Denmark**: “Apparatets stikprop skal tilsluttes en stikkontakt med jord, som giver forbindelse til stikproppens jord.”	Should be considered before marketing in this country.	N/A
1.7.5 1.7.5 (A11:2009)	In **Denmark**, socket-outlets for providing power to other equipment shall be in accordance with the Heavy Current Regulations, Section 107-2-D1, Standard Sheet DK 1-3a, DK 1-5a or DK 1-7a, when used on Class I equipment. For STATIONARY EQUIPMENT the socket-outlet shall be in accordance with Standard Sheet DK 1-1b or DK 1-5a. For **CLASS II EQUIPMENT** the socket outlet shall be in accordance with Standard Sheet DKA 1-4a.	No socket-outlet.	N/A

IEC60950_1G - ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict

ZB ANNEX (normative) SPECIAL NATIONAL CONDITIONS (EN)			
Clause	Requirement + Test	Result - Remark	Verdict
1.7.5 (A2:2013)	In **Denmark**, socket-outlets for providing power to other equipment shall be in accordance with the DS 60884-2-D1:2011. For class I equipment the following Standard Sheets are applicable: DK 1-3a, DK 1-1c, DK 1-1d, DK 1-5a or DK 1-7a, with the exception for STATIONARY EQUIPMENT where the socket-outlets shall be in accordance with Standard Sheet DK 1-1b, DK 1-1c, DK 1-1d or DK 1-5a. Socket outlets intended for providing power to Class II apparatus with a rated current of 2,5 A shall be in accordance with DS 60884-2-D1 standard sheet DKA 1-4a. Other current rating socket outlets shall be in compliance with by DS 60884-2-D1 Standard Sheet DKA 1-3a or DKA 1-3b. Justification the Heavy Current Regulations, 6c		N/A
2.2.4	In **Norway**, for requirements see 1.7.2.1, 6.1.2.1 and 6.1.2.2 of this annex.	Refer to 1.7.2.1, 6.1.2.1 and 6.1.2.2 of this annex.	N/A
2.3.2	In **Finland**, **Norway** and **Sweden** there are additional requirements for the insulation. See 6.1.2.1 and 6.1.2.2 of this annex.	No TNV circuit.	N/A
2.3.4	In **Norway**, for requirements see 1.7.2.1, 6.1.2.1 and 6.1.2.2 of this annex.		N/A
2.6.3.3	In the **United Kingdom**, the current rating of the circuit shall be taken as 13 A, not 16 A.	Considered	P
2.7.1	In the **United Kingdom**, to protect against excessive currents and short-circuits in the PRIMARY CIRCUIT of DIRECT PLUG-IN EQUIPMENT, tests according to 5.3 shall be conducted, using an external protective device rated 30 A or 32 A. If these tests fail, suitable protective devices shall be included as integral parts of the DIRECT PLUG-IN EQUIPMENT, so that the requirements of 5.3 are met.	Not direct plug in equipment.	N/A
2.10.5.13	In **Finland**, **Norway** and **Sweden**, there are additional requirements for the insulation, see 6.1.2.1 and 6.1.2.2 of this annex.	No TNV circuit.	N/A
3.2.1.1	In **Switzerland**, supply cords of equipment having a RATED CURRENT not exceeding 10 A shall be provided with a plug complying with SEV 1011 or IEC 60884-1 and one of the following dimension sheets: SEV 6532-2.1991 Plug Type 15 3P+N+PE 250/400 V, 10 A	Power supply cord is not provided.	N/A

IEC60950_1G - ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict

ZB ANNEX (normative) SPECIAL NATIONAL CONDITIONS (EN)			
Clause	Requirement + Test	Result - Remark	Verdict
	SEV 6533-2.1991 Plug Type 11 L+N 250 V, 10 A SEV 6534-2.1991 Plug Type 12 L+N+PE 250 V, 10 A In general, EN 60309 applies for plugs for currents exceeding 10 A. However, a 16 A plug and socket-outlet system is being introduced in Switzerland, the plugs of which are according to the following dimension sheets, published in February 1998: SEV 5932-2.1998: Plug Type 25 , 3L+N+PE 230/400 V, 16 A SEV 5933-2.1998:Plug Type 21, L+N, 250 V, 16A SEV 5934-2.1998: Plug Type 23, L+N+PE 250 V, 16 A		N/A
3.2.1.1	In **Denmark**, supply cords of single-phase equipment having a rated current not exceeding13 A shall be provided with a plug according to the Heavy Current Regulations, Section 107-2-D1. 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 poly-phase equipment and single-phase equipment having a RATED CURRENT exceeding 13 A is provided with a supply cord with a plug, this plug shall be in accordance with the Heavy Current Regulations, Section 107-2-D1 or EN 60309-2.		N/A

IEC60950_1G - ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict

ZB ANNEX (normative) SPECIAL NATIONAL CONDITIONS (EN)			
Clause	Requirement + Test	Result - Remark	Verdict
3.2.1.1 (A2:2013)	In **Denmark**, supply cords of single-phase equipment having a rated current not exceeding 13 A shall be provided with a plug according to DS 60884-2-D1. 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. Justification the Heavy Current Regulations, 6c	Power supply cord is not provided.	N/A
3.2.1.1	In **Spain**, supply cords of single-phase equipment having a rated current not exceeding 10 A shall be provided with a plug according to UNE 20315:1994. Supply cords of single-phase equipment having a rated current not exceeding 2,5 A shall be provided with a plug according to UNE-EN 50075:1993. 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 UNE 20315:1994. If poly-phase equipment is provided with a supply cord with a plug, this plug shall be in accordance with UNE-EN 60309-2.	Power supply cord is not provided.	N/A
3.2.1.1	In the **United Kingdom**, apparatus which is fitted with a flexible cable or cord and is designed to be connected to a mains socket conforming to BS 1363 by means of that flexible cable or cord and plug, shall be fitted with a 'standard plug' in accordance with Statutory Instrument 1768:1994 - The Plugs and Sockets etc. (Safety) Regulations 1994, unless exempted by those regulations. NOTE 'Standard plug' is defined in SI 1768:1994 and essentially means an approved plug conforming to BS 1363 or an approved conversion plug.	Power supply cord is not provided.	N/A

IEC60950_1G - ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict

ZB ANNEX (normative) SPECIAL NATIONAL CONDITIONS (EN)			
Clause	Requirement + Test	Result - Remark	Verdict
3.2.1.1	In **Ireland**, apparatus which is fitted with a flexible cable or cord and is designed to be connected to a mains socket conforming to I.S. 411 by means of that flexible cable or cord and plug, shall be fitted with a 13 A plug in accordance with Statutory Instrument 525:1997 - National Standards Authority of Ireland (section 28) (13 A Plugs and Conversion Adaptors for Domestic Use) Regulations 1997.	Power supply cord is not provided.	N/A
3.2.4	In **Switzerland**, for requirements see 3.2.1.1 of this annex.		N/A
3.2.5.1	In the **United Kingdom**, a power supply cord with conductor of 1,25 mm2 is allowed for equipment with a rated current over 10 A and up to and including 13 A.		N/A
3.3.4	In the **United Kingdom**, the range of conductor sizes of flexible cords to be accepted by terminals for equipment with a RATED CURRENT of over 10 A up to and including 13 A is: • 1,25 mm^2 to 1,5 mm^2 nominal cross-sectional area.		N/A
4.3.6	In the **United Kingdom**, the torque test is performed using a socket outlet complying with BS 1363 part 1:1995, including Amendment 1:1997 and Amendment 2:2003 and 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.	Not direct plug-in equipment.	N/A
4.3.6	In **Ireland**, DIRECT PLUG-IN EQUIPMENT is known as plug similar devices. Such devices shall comply with Statutory Instrument 526:1997 - National Standards Authority of Ireland (Section 28) (Electrical plugs, plug similar devices and sockets for domestic use) Regulations, 1997.	Not direct plug-in equipment.	N/A

IEC60950_1G - ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict

ZB ANNEX (normative) SPECIAL NATIONAL CONDITIONS (EN)			
Clause	Requirement + Test	Result - Remark	Verdict
5.1.7.1	In **Finland**, **Norway** and **Sweden** TOUCH CURRENT measurement results exceeding 3,5 mA r.m.s. are permitted only for the following equipment: • STATIONARY PLUGGABLE EQUIPMENT TYPE A that is intended to be used in a RESTRICTED ACCESS LOCATION where equipotential bonding has been applied, for example, in a telecommunication centre; and has provision for a permanently connected PROTECTIVE EARTHING CONDUCTOR; and is provided with instructions for the installation of that conductor by a SERVICE PERSON; • STATIONARY PLUGGABLE EQUIPMENT TYPE B; • STATIONARY PERMANENTLY CONNECTED EQUIPMENT.	Not exceeding 3,5mA	N/A
6.1.2.1 (A1:2010)	In **Finland**, **Norway** and **Sweden**, add the following text between the first and second paragraph of the compliance clause: 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. Alternatively for components, there is no distance through insulation requirements 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 2.10.11 with an electric strength test of 1,5 kV multiplied by 1,6 (the electric strength test of 2.10.10 shall be performed using 1,5 kV), and - is subject to ROUTINE TESTING for electric strength during manufacturing, using a test voltage of 1,5 kV.	No connection to telecommunication networks	N/A

IEC60950_1G - ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict

ZB ANNEX (normative) SPECIAL NATIONAL CONDITIONS (EN)			
Clause	Requirement + Test	Result - Remark	Verdict
	It is permitted to bridge this insulation with an optocoupler complying with 2.10.5.4 b). 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 EN 60950-1:2006, 6.2.2.1; - 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
6.1.2.2	In **Finland**, **Norway** and **Sweden**, the exclusions are applicable for PERMANENTLY CONNECTED EQUIPMENT, PLUGGABLE EQUIPMENT TYPE B and equipment intended to be used in a RESTRICTED ACCESS LOCATION where equipotential bonding has been applied, e.g. in a telecommunication centre, and which has provision for a permanently connected PROTECTIVE EARTHING CONDUCTOR and is provided with instructions for the installation of that conductor by a SERVICE PERSON.		N/A
7.2	In **Finland**, **Norway** and **Sweden**, for requirements see 6.1.2.1 and 6.1.2.2 of this annex. The term TELECOMMUNICATION NETWORK in 6.1.2 being replaced by the term CABLE DISTRIBUTION SYSTEM.	No connection to CDS.	N/A
7.3 (A11:2009)	In **Norway** and **Sweden**, for requirements see 1.2.13.14 and 1.7.2.1 of this annex.		N/A

IEC60950_1G - ATTACHMENT			
Clause	Requirement + Test	Result - Remark	Verdict

Annex ZD
(informative)

IEC and CENELEC code designations for flexible cords

Type of flexible cord	Code designations	
	IEC	CENELEC
PVC insulated cords		
Flat twin tinsel cord	60227 IEC 41	H03VH-Y
Light polyvinyl chloride sheathed flexible cord	60227 IEC 52	H03VV-F H03VVH2-F
Ordinary polyvinyl chloride sheathed flexible cord	60277 IEC 53	H05VV-F H05VVH2-F
Rubber insulated cords		
Braided cord	60245 IEC 51	H03RT-F
Ordinary tough rubber sheathed flexible cord	60245 IEC 53	H05RR-F
Ordinary polychloroprene sheathed flexible cord	60245 IEC 57	H05RN-F
Heavy polychloroprene sheathed flexible cord	60245 IEC 66	H07RN-F
Cords having high flexibility		
Rubber insulated and sheathed cord	60245 IEC 86	H03RR-H
Rubber insulated, crosslinked PVC sheathed cord	60245 IEC 87	H03RV4-H
Crosslinked PVC insulated and sheathed cord	60245 IEC 88	H03V4V4-H

**********End of Attachment 2**********

Specification

Camera	**iDS-TCV500-BI**	**iDS-TCV900-BI**	
Image Sensor	5 MP (2/3'' GMOS)	9 MP (1'' GMOS)	
Min. Illumination	Color: 0.001 Lux@(F1.4, AGC ON), 0.0005 Lux with IR		
Shutter Speed	50 µs to 20,000 µs		
Day & Night	IR cut filter		
Digital Noise Reduction	2D/3D DNR		
SNR	60 dB		
Lens			
Focal Length	15 to 50 mm	11 to 40 mm	25 mm
Aperture	F1.4-C	F1.6-25	F1.4
Focus	Manual		
FOV	CS-Mount Horizontal: 42.7° to 13.7° Vertical: 23.4° to 7.6°	CS-Mount Horizontal: 62° to 23.6° 'ertical: 32.2° to 12.2°	CS-Mount Horizontal: 62° to 23.6° Vertical: 32.2° to 12.2°
IR Light			
IR Range	Up to 30 m	Up to 27 m	
Wavelength	850 nm		
Compression Standard			

Video Compression	Main stream: H.265/H.264/MJPEG Sub-stream: H.265/H.264/MJPEG	
H.264 Type	Baseline profile/Main profile/High profile	
H.265 Type	Baseline profile/Main profile/High profile	
Video Bit Rate	32 Kbps to 16 Mbps	
Smart Feature		
Recognition	License plate recognition	
Coverage	Up to 2 lanes	2 to 3 lanes
Trigger Mode	External I/O trigger/Radar trigger/Video trigger	
Supplement Light Type	External strobe/flash/solid light	
Smart Function	Vehicle type classification, vehicle color recognition, no-plate vehicle capture, moving direction detection	
Road Traffic and Vehicle Detection		
Country/Region	**Mid-East:** United Arab Emirates (Abu Dhabi, Fuchaiha, Dubai, Cape Haima, Ozhman, Sharjah, Umgavan), Qatar, Iran, Iraq, Egypt, Jordan, Kuwait, Saudi Arabia, Pakistan, Oman, Lebanon, Bahrain **Africa:** Nigeria, Kenya, Cote d'Ivoire, South Africa, Tanzania, Mauritius, Morocco, Tunisia, Sierra Leone, Zambia, Ghana, Zimbabwe, Uganda, Angola, Ethiopia, Senegal, Algeria **Asia-Pacific:** Australia, New Zealand, Indonesia, Malaysia, Singapore, South Korea, Thailand, Vietnam, Philippines, Hong Kong, Macao, Taiwan, Burma, India, Mongolia, Cambodia, Laos, Bangladesh **America:** United States of America, Canada, Argentina, Chile, Paraguay, Uruguay, El Salvador, Bolivia,	

	Colombia, Brazil, Ecuador, Peru, Mexico, Panama, Costa Rica, Trinidad and Tobago, Dominican, Guatemala **Europe:** Turkey, Croatia, Slovakia, Czech Republic, Bulgaria, Macedonia, Hungary, Greece, Poland, France, Netherlands, Switzerland, Spain, Britain, Ireland, Germany, Italy, Austria, Israel, Palestine, Belgium, Luxembourg ,Albania, Kosovo **Russian-Speaking Regions:** Azerbaijan, Belarus, Kazakhstan, Lithuania, Georgia, Estonia, Latvia, Russian Federation, Ukraine, Moldova, Uzbekistan, Kyrgyzstan, Armenia
Accuracy (Under recommended installation and lighting conditions)	Capture rate > 98% Vehicle moving direction recognition accuracy > 98.5% LPR accuracy > 98% Mistaken capture rate < 2%
	European and Russian-Speaking Regions: LPR accuracy > 98% Country/Region recognition accuracy > 95%
No License Plate Detection	Supported
Motorcycle LPR	Supported
Vehicle Type	Car/Van/Bus/Truck/Light Truck/SUV_MPV/Pickup/Pedestrian/Motorcycle/Tricycle
Vehicle Color	Red, yellow, green, blue, pink, purple, cyan, brown, white, grey, black **Recognizable at daytime only.**

Vehicle Manufacturer	84 manufacturers: Hyundai, Toyota, KIA, Honda, Volkswagen, Benz, Nissan, Ford, Isuzu, BMW, Chevrolet, Mitsubishi, Renault, Opel, Suzuki, Skoda, Daewoo, Audi, Mazda, GAC HINO, Peugeot, SsangYong, Citroen, Fiat, Scania, MAN, Volvo, Lexus, Seat, Land Rover, Daihatsu, Dongwo, Subaru, Iveco, MINI, JEEP, Porsche, Chery, Dodge, Chrysler, Acura, Alfa Romeo, Great Wall, Infiniti, Smart, Saic Maxus, JAC, Jaguar, GMC, Lincoln, JMC, SAAB, FAW, Yutong, Guangzhou Yunbao, Joylong, Geely, Cadillac, JBC, An'kai, Haima, Foton, King Long, Dongfeng, Geely-Emgrand, Perodua, UD, BYD, Renault Samsung, Proton, HICOM, Malaysia_Unknown 1, Hyundai-Rohens, SsangYong-Old Version, Equus-Old Version, CNHTC, Rolls-Royce, Beiben Truck, Haval, Hino, Kia-Borrego, Chang'an, Alfa, FORO	
License Plate Color Recognition	Customized to support	
Driving on Lane Line Detection	Supported (only in strobe light mode)	
Illegal Lane Change Detection	Supported (only in strobe light mode)	
Wrong-way Driving Detection	Supported	
Emergency Lane Occupation	Supported (truck forbidden lane, emergency lane, urban bus lane)	
Seatbelt Detection	Supported (with flash supplement light)	
Phone Call Detection	Supported (with flash supplement light)	
Capture Speed Range	5 to 250 km/h	
Image		
Max. Resolution	2464 × 2056	4096 × 2160
Main Stream	50 Hz: 50 fps (2448 × 2048, 2464 × 2056, 2048 × 1536, 1920 × 1080) 60 Hz: 30 fps(2448 × 2048, 2464 × 2056, 2048 × 1536, 1920 × 1080)	50 Hz: 25 fps (4096 × 2160, 1920 × 1080, 1280 × 720) 60 Hz: 30 fps (4096 × 2160, 1920 × 1080, 1280 × 720)
Sub-Stream	1920 × 1080, 1280 × 720, 704 × 576, 352 × 288	1920 × 1080, 704 × 576
Image Enhancement	BLC, HLC, 3D DNR	
Image Settings	Rotate mode, saturation, brightness, contrast, sharpness, AGC, and white balance are adjustable by client software or web browser.	Saturation, brightness, contrast, sharpness, AGC, and white balance are adjustable by client software or web browser.

SVC	H.264 and H.265 encoding
Day/Night Switch	Auto/Scheduled/Triggered by alarm in
Picture Overlay	Logo picture can be overlaid on video with 128 × 128 24-bit bmp format.
Network	
Network Storage	Micro SD/TF card (128 GB), local storage and CVR, NVR, ANR
Alarm Trigger	HDD error, network disconnected, IP address conflicted, vehicle detector exception, traffic light detector exception
Protocols	TCP/IP, HTTP, HTTPS, FTP, DNS, DDNS, RTP, RTSP, RTCP, NTP, UPnP, IPv6, UDP
Security Measures	Password protection, HTTPS encryption, digest authentication for HTTP/HTTPS, digest authentication for ONVIF (Version 2.1)
General Function	One-key reset, three streams, heartbeat, password protection, watermark
API	ONVIF (Version 2.1, PROFILE S, PROFILE G), ISAPI, SDK
Simultaneous Live View	Up to 20 channels
User/Host	Up to 32 users 3 user levels: administrator, operator, and user
Client	iVMS-8600, iVMS-4200 (Only for video live view and LPR information search), Hik-Central Master, Hik-Central Pro
Web Browser	IE8-IE11, plug-in free live view supported
Interface	
Communication Interface	2 RJ45 10 M/100 M/1000 M self-adaptive Ethernet interfaces 3 RS-485 interfaces (half duplex, HIKVISION) 1 RS-232 interface
Alarm	2 input interfaces (T1, SYNC), 7 output interfaces
On-board storage	Built-in micro SD/TF card, up to 128 GB
USB Interface	1 USB 2.0 interface
General	
Firmware Version	V4.3.1
Operating System	Linux
Certifications	CE, FCC, RoHS
Operating Conditions	Temperature: -40 °C to 60 °C (-40 °F to 140 °F) Humidity: 95% or less (non-condensing)
Power Supply	24 VDC ± 20%/100 to 240 VAC
Protection Level	IP66
Heater	Supported
Material	Aluminum alloy
Dimensions	With package: 175.68 × 137.5 × 443.99 mm (6.92" × 5.41" × 17.48")
Weight	Camera: approx. 6.5 ± 0.5 kg (14.3 ± 1.1 lb)
Power Consumption	< 30 W

** Listed resolutions are only selectable options. It does not mean that all streams can work at their maximum resolution at the same time.*

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