

Test Report No.: **1160050423g 001**

Page 1 of 16

Client: **Hangzhou Hikvision Digital Technology Co., Ltd.**
No.555 Qianmo Road,Binjiang District Hangzhou310052,China

Test item(s): PANIC BUTTON

Test Model No(s): DS-1530HMI

Reference Style No(s). DS-MP1531, DS-MP1534, DS-MP153X, DS-MP1531UHK,
DS-MP1531CKV, DS-MP1531UVS, DS-MP1531KVO,
DS-MP1531HUN

Sample Receiving date: 2018-08-22

Delivery condition: Apparent good, Samples tested as received

Test specification:

Test result:

Overall results according to tests performed

1. Cadmium, Lead, Chromium (VI), Mercury, Polybrominated biphenyls (PBB) and Polybrominated diphenyl ethers (PBDE) Benzylbutyl phthalate (BBP), Dibutyl phthalate (DBP), Bis(2-ethylhexyl) phthalate (DEHP), Diisobutyl phthalate (DIBP) According to RoHS (recast): Restriction of the Use of Certain Hazardous Substances in Electrical and Electronic Equipment, 2011/65/EU last amended by (EU) 2015/863

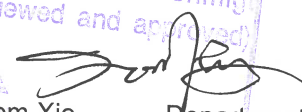
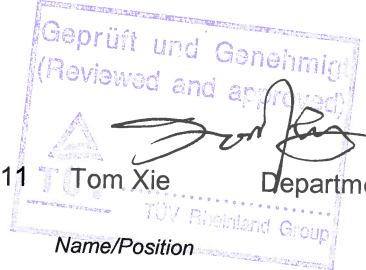
PASS

Other Information:

Test period: 2018-08-22 ~ 2018-09-05

Remark: The testing items in the report were subcontracted to the lab which complied with ISO17025

For and on behalf of
TÜV Rheinland / CCIC (Ningbo) Co., Ltd.

2018-09-11  Department Manager
Date Name/Position


Test result is drawn according to the kind and extent of tests performed.

This test report relates to the a. m. test sample. Without permission of the test center this test report is not permitted to be duplicated in extracts. This test report does not entitle to carry any safety mark on this or similar products.

Test Report No.:

1160050423g 001

Page 2 of 16

1. Screening Test by XRF Spectroscopy

 Test Method: Cadmium, Lead, Mercury, Chromium, Bromine
 -With reference to IEC 62321-3-1: 2013

Testing Period: 2018-08-22 ~ 2018-09-10

Material No.	Description	Result (mg/kg)				
		Cd	Pb	Cr [^]	Hg	Br [^]
1	Black plastic shell	n.d.	n.d.	n.d.	n.d.	n.d.
2	Red plastic button	n.d.	n.d.	n.d.	n.d.	n.d.
3	White plastic button	n.d.	n.d.	n.d.	n.d.	n.d.
4	Black plastic cover	n.d.	n.d.	n.d.	n.d.	n.d.
5	Silvery metal screw	n.d.	n.d.	n.d.	n.d.	N.A.
6	White bar cord label paper	n.d.	n.d.	n.d.	n.d.	n.d.
7	White plastic terminal	n.d.	n.d.	n.d.	n.d.	n.d.
8	Silvery metal wire core	n.d.	n.d.	n.d.	n.d.	N.A.
9	Black plastic wire sheath	n.d.	n.d.	n.d.	n.d.	n.d.
10	Black plastic interface	n.d.	n.d.	n.d.	n.d.	d(^1)
11	Silvery metal pin	n.d.	n.d.	n.d.	n.d.	N.A.
12	Beige plastic terminal	n.d.	n.d.	n.d.	n.d.	d(^1)
13	Green PCB board	n.d.	n.d.	n.d.	n.d.	d(^1)
14	Soldering tin (PCB board)	n.d.	d(^1)	n.d.	n.d.	N.A.
15	Silvery foil (PCB board)	n.d.	n.d.	n.d.	n.d.	N.A.
16	SMD IC (STM32F)	n.d.	n.d.	n.d.	n.d.	n.d.
17	XTL (HLX8B)	n.d.	n.d.	n.d.	n.d.	N.A.
18	SMD audion	n.d.	n.d.	n.d.	n.d.	n.d.
19	Black plastic interface	n.d.	n.d.	n.d.	n.d.	d(^1)
20	Silvery metal pin	n.d.	n.d.	n.d.	n.d.	N.A.
21	Yellow PCB board	n.d.	n.d.	n.d.	n.d.	d(^1)
22	Black plastic button (switch)	n.d.	n.d.	n.d.	n.d.	n.d.
23	Silvery metal shell (switch)	n.d.	n.d.	d(^2)	n.d.	N.A.
24	SMD IC (262)	n.d.	n.d.	n.d.	n.d.	n.d.
25	SMD IC (SIPEX)	n.d.	n.d.	n.d.	n.d.	n.d.
26	Soldering tin (PCB board)	n.d.	d(^1)	n.d.	n.d.	N.A.
27	SMD audion (GH17K)	n.d.	n.d.	n.d.	n.d.	n.d.
28	SMD audion (K2N)	n.d.	n.d.	n.d.	n.d.	n.d.
29	LED	n.d.	n.d.	n.d.	n.d.	n.d.
30	Black plastic interface	n.d.	n.d.	n.d.	n.d.	n.d.
31	Yellow plastic wire sheath	n.d.	n.d.	n.d.	n.d.	n.d.
32	Green plastic wire sheath	n.d.	n.d.	n.d.	n.d.	n.d.

Material No.	Description	Result (mg/kg)				
		Cd	Pb	Cr [^]	Hg	Br [^]
33	Black plastic wire sheath	n.d.	n.d.	n.d.	n.d.	n.d.
34	Red plastic wire sheath	n.d.	n.d.	n.d.	n.d.	n.d.
35	White label paper	n.d.	n.d.	n.d.	n.d.	n.d.
36	Black plastic wire sleeve	n.d.	n.d.	n.d.	n.d.	n.d.
37	Black plastic plug core	n.d.	n.d.	n.d.	n.d.	n.d.
38	Soldering tin	n.d.	d(^1)	n.d.	n.d.	N.A.
39	Silvery metal pin	n.d.	d(^1)	n.d.	n.d.	N.A.
40	Silvery metal plug shell	n.d.	n.d.	n.d.	n.d.	N.A.
41	Black plastic plug shell	n.d.	n.d.	n.d.	n.d.	n.d.
42	Black plastic sleeve	n.d.	n.d.	n.d.	n.d.	n.d.
43	Black plastic wire sleeve	n.d.	n.d.	n.d.	n.d.	n.d.
44	Black plastic wire sheath	n.d.	n.d.	n.d.	n.d.	n.d.
45	Red plastic wire sheath	n.d.	n.d.	n.d.	n.d.	n.d.
46	Brown plastic wire sheath	n.d.	n.d.	n.d.	n.d.	n.d.
47	Dark red plastic wire sheath	n.d.	n.d.	n.d.	n.d.	n.d.
48	Silvery metal wire core	n.d.	n.d.	n.d.	n.d.	N.A.
49	White paper	n.d.	n.d.	n.d.	n.d.	n.d.
50	Silvery metal pin	n.d.	n.d.	n.d.	n.d.	N.A.
51	Black plastic plug shell	n.d.	n.d.	n.d.	n.d.	n.d.
52	Silvery metal plug shell	n.d.	n.d.	n.d.	n.d.	N.A.
53	White filler	n.d.	n.d.	n.d.	n.d.	n.d.
54	Black plastic plug shell	n.d.	n.d.	n.d.	n.d.	n.d.
55	Black plastic sleeve ribbon	n.d.	n.d.	n.d.	n.d.	n.d.
56	Silvery metal core ribbon	n.d.	n.d.	n.d.	n.d.	N.A.

Abbreviation:

Pb	denotes Lead
Cd	denotes Cadmium
Hg	denotes Mercury
Cr	denotes Chromium
Cr(VI)	denotes Chromium(VI)
Br	denotes Bromine
PBBs	denotes Total Polybrominated Biphenyls
PBDEs	denotes Total Polybrominated Diphenyl Ethers
<	denotes less than
N.A.	denotes Not Applicable
n.d.	denotes Not Detected
d	denotes Detected

Remark:

(^1) The screening result was found in the inconclusive region (X), thus the further wet chemistry tests are suggested.

(^2) The Chromium (VI) content in surface layer has been confirmed with reference to IEC 62321-7-1: 2015.

XRF Screening limits for different materials:

Materials	Concentration (mg/kg)				
	Cd	Cr	Pb	Hg	Br
Metallic material	P≤ 60 < X ≤140 < F	P≤ 640 < X	P≤ 670 < X≤1360 < F	P≤ 660 < X≤1340 < F	NA
Polymeric material	P≤ 60 < X ≤140 < F	P≤ 640 < X	P≤ 670 < X≤1360 < F	P≤ 660 < X≤1340 < F	P≤ 290 < X
Electronic material	P≤ 40 < X ≤160 < F	P≤ 440 < X	P≤ 470 < X≤1640 < F	P≤460 < X≤1540 < F	P≤ 240 < X

2. Confirmation Test by Wet Chemistry

Test Method: Total Cadmium, Lead, Mercury, Chromium
 -Ref. to IEC 62321-4: 2013 & IEC 62321-5: 2013
 Chromium (VI)
 - For Metal material - Ref. to IEC 62321-7-1: 2015
 - For Plastic or Electronic material – Ref. to IEC 62321-7-2:2017
 - For Leather material - Ref. to ISO 17075: 2007
 PBBs, PBDEs – Ref. to IEC 62321-6: 2015
 Testing Period: 2018-08-22 ~ 2018-09-10

Material list:

Material No.	Material	Color	Test Plan
			A=Test HM only B=Test FR only C=Test HM+FR
10	plastic	black	B
12	plastic	beige	B
13	PCB	green	B
14	solder	silvery	A
19	plastic	black	B
21	PCB	yellow	B
23	metal	silvery	A
26	solder	silvery	A
38	solder	silvery	A
39	metal(copper)	silvery	A

Abbreviation: HM (Heavy metal) = Cd, Pb, Hg, Cr (VI)
 FR (Flame Retardant) = PBBs, PBDEs

Test result:

	Cd	Pb	Cr (VI)	Hg	PBBs	PBDEs
Maximum Permissible Limit ppm (mg/kg)	100	1000	1000	1000	1000	1000

Material No.	Ppm (mg/kg)					
	Cd	Pb	Cr [^]	Hg	PBBs	PBDEs
	MDL (mg/kg)					
	2	2	2	2	--(^3)	--(^3)
10	N.A.	N.A.	N.A.	N.A.	N.D.	N.D.
12	N.A.	N.A.	N.A.	N.A.	N.D.	N.D.
13	N.A.	N.A.	N.A.	N.A.	N.D.	N.D.
14	N.A.	252	N.A.	N.A.	N.A.	N.A.
19	N.A.	N.A.	N.A.	N.A.	N.D.	N.D.
21	N.A.	N.A.	N.A.	N.A.	N.D.	N.D.
26	N.A.	29	N.A.	N.A.	N.A.	N.A.
38	N.A.	522	N.A.	N.A.	N.A.	N.A.
39	N.A.	16245 ^[6(c)]	N.A.	N.A.	N.A.	N.A.

Material no.	Hexavalent Chromium Content ($\mu\text{g}/\text{cm}^2$) ^(*)
	RL: 0.10 $\mu\text{g}/\text{cm}^2$
23	Negative

Abbreviation:

Pb	denotes Lead
Cd	denotes Cadmium
Hg	denotes Mercury
Cr	denotes Chromium
Cr(VI)	denotes Chromium(VI)
PBBs	denotes Total Polybrominated Biphenyls
PBDEs	denotes Total Polybrominated Diphenyl Ethers
N.D.	denotes Not Detected
MDL	denotes Method Detection Limit
N.A.	denotes Not Applicable
^	The total Chromium have been determined

Remark:

1. Component(s)/ materials(s) with an area of less than 2mm x 2mm will not be selected for testing according to RoHS Directive 2011/65/EU due to technical reason.
2. For the test sample does not have detail materials information provided by client, visually identical materials (e.g. wire insulation, solder points, etc.) will be considered as the same material.
3. Solder points on a printing circuit board will be examined several times based on optical anomalies or discoloration of the solder point(s) unless the solder point(s) is obviously generated automatically during production.
4. All other materials will be sampled and tested at one test point representatively.

(*1) The total chromium content in Metal sample was found to be exceeded the maximum permissible limit (1000mg/kg). Thus, the Chromium (VI) content in surface layer have been confirmed with reference to IEC 62321-7-1: 2015 Annex.

	Chromium (VI) concentration	Qualitative result
Negative	<0.1µg/cm ²	The sample is negative for Cr(VI). –The Cr(VI) concentration is below the limit of quantification. The coating is considered a non Cr(VI) based coating.
Inconclusive	≥0.1µg/cm ² and ≤0.13 µg/cm ²	The result is considered to be inconclusive. –Unavoidable coating variations may influence the determination. Recommendation: if additional samples are available, perform a total of 3 trials to increase sampling surface area. Use the averaged result of the 3 trails for the final determination.
Positive	>0.13 µg/cm ²	The sample is positive for Cr(VI). –The Cr(VI) concentration is above the limit of quantification and the statistical margin of error. The sample coating is considered to contain Cr(VI).

(*2) The total chromium content in plastic sample or electronic sample was found to be exceeded the maximum permissible limit (1000mg/kg). Thus, the Chromium (VI) content have been confirmed with reference to IEC 62321-7-2:2017.

(*3) The total chromium content in leather sample was found to be exceeded the maximum permissible limit (1000mg/kg). Thus, the Chromium (VI) content have been confirmed with reference to ISO 17075: 2007.

(^3) The method detection limit for each individual PBBs and individual PBDEs are:

Method Detection Limit in ppm (mg/kg)		
PBBs	Monbromobiphenyl	5
	Dibromobiphenyl	5
	Tribromobiphenyl	5
	Tetrabromobiphenyl	5
	Pentabromobiphenyl	5
	Hexabromobiphenyl	5
	Heptabromobiphenyl	5
	Octabromobiphenyl	5
	Nonabromobiphenyl	5
	Decabromobiphenyl	5
	PBDEs	Monbromodiphenyl ether
Dibromodiphenyl ether		5
Tribromodiphenyl ether		5
Tetrabromodiphenyl ether		5
Pentabromodiphenyl ether		5
Hexabromodiphenyl ether		5
Heptabromodiphenyl ether		5
Octabromodiphenyl ether		5
Nonabromodiphenyl ether		5
Decabromodiphenyl ether		5

6(c) Copper alloy containing up to 4 % lead by weight.

3. BBP, DBP, DEHP, DIBP content

Test method: Organic solvent extraction, analyzed by GCMS (Ref. to DIN EN 62321-8: 2014 (IEC 111/321/CD: 2013))

Testing Period: 2018-08-22 ~ 2018-09-10

Test result:

	BBP	DBP	DEHP	DIBP
Maximum permissible Limit (mg/kg)	1000	1000	1000	1000

Test No.	Material No.	(mg/kg)			
		BBP	DBP	DEHP	DIBP
		RL (mg/kg)			
		50	50	50	50
T001	1+2+3	n.d.	n.d.	n.d.	n.d.
T002	4+6	n.d.	n.d.	n.d.	n.d.
T003	7+10+12	n.d.	n.d.	n.d.	n.d.
T004	13+19+21	n.d.	n.d.	n.d.	n.d.
T005	22+30	n.d.	n.d.	n.d.	n.d.
T006	9+31+32	n.d.	n.d.	n.d.	n.d.
T007	33+34+44	n.d.	n.d.	n.d.	n.d.
T008	45+46+47	n.d.	n.d.	n.d.	n.d.
T009	35+36+55	n.d.	n.d.	n.d.	n.d.
T010	42+43+49	n.d.	n.d.	n.d.	n.d.
T011	37+41	n.d.	n.d.	n.d.	n.d.
T012	51+53+54	n.d.	n.d.	76	n.d.

Abbreviation: BBP= Benzylbutyl phthalate
 DBP= Dibutyl phthalate
 DEHP= Bis(2-ethylhexyl) phthalate
 DIBP= Diisobutyl phthalate
 n.d.= Not Detected (< Reporting Limit)
 RL = Reporting Limit
 N.A. = Not Applicable
 mg/kg= milligram per kilogram

Hangzhou Hikvision Digital Technology Co., Ltd. declared that:

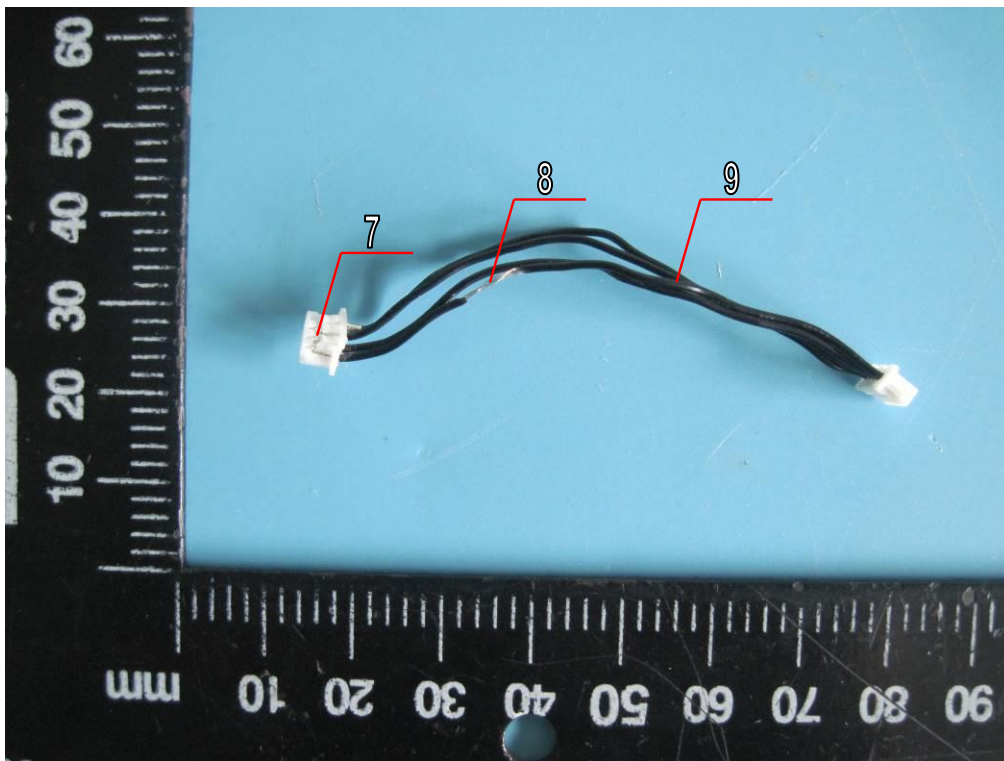
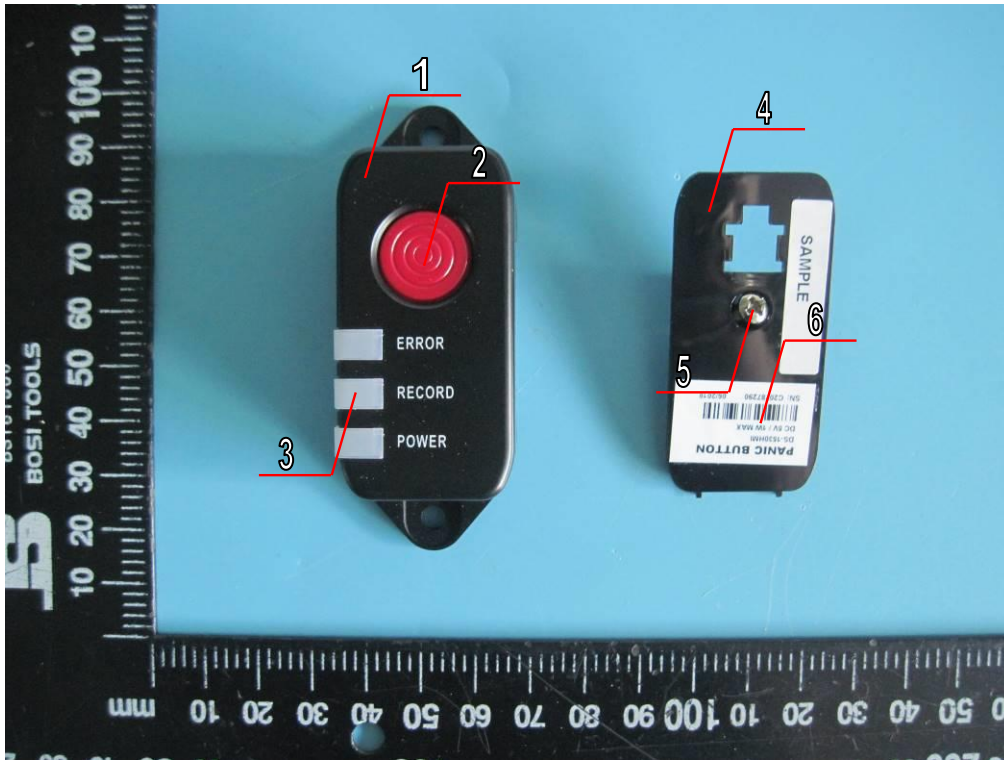
The following models and test model DS-1530HMI are the same serials, all components were made by the same raw material but different in shapes and sizes. Hangzhou Hikvision Digital Technology Co., Ltd. will be responsible for this statement.

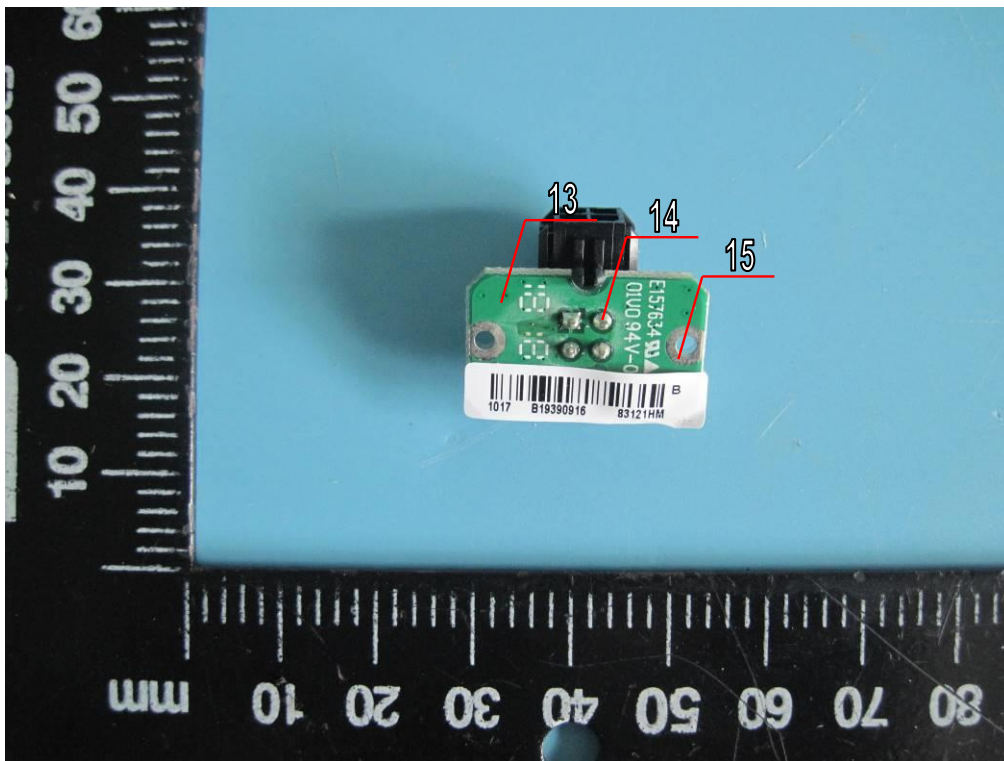
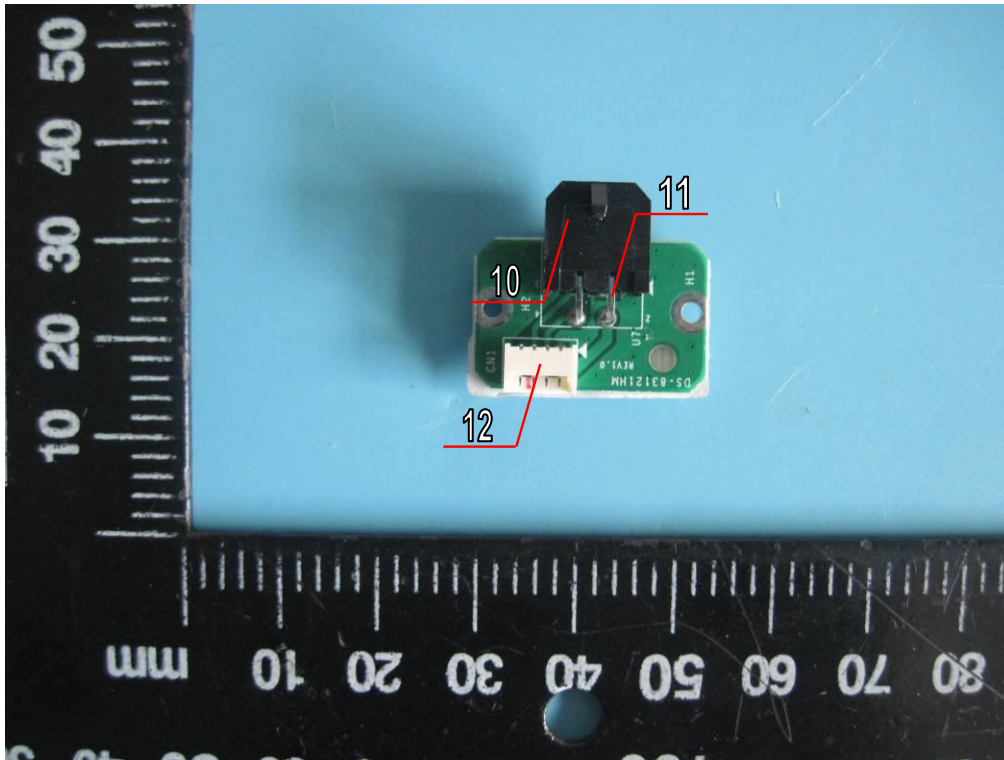
DS-MP1531, DS-MP1534, DS-MP153X, DS-MP1531UHK, DS-MP1531CKV, DS-MP1531UVS, DS-MP1531KVO, DS-MP1531HUN

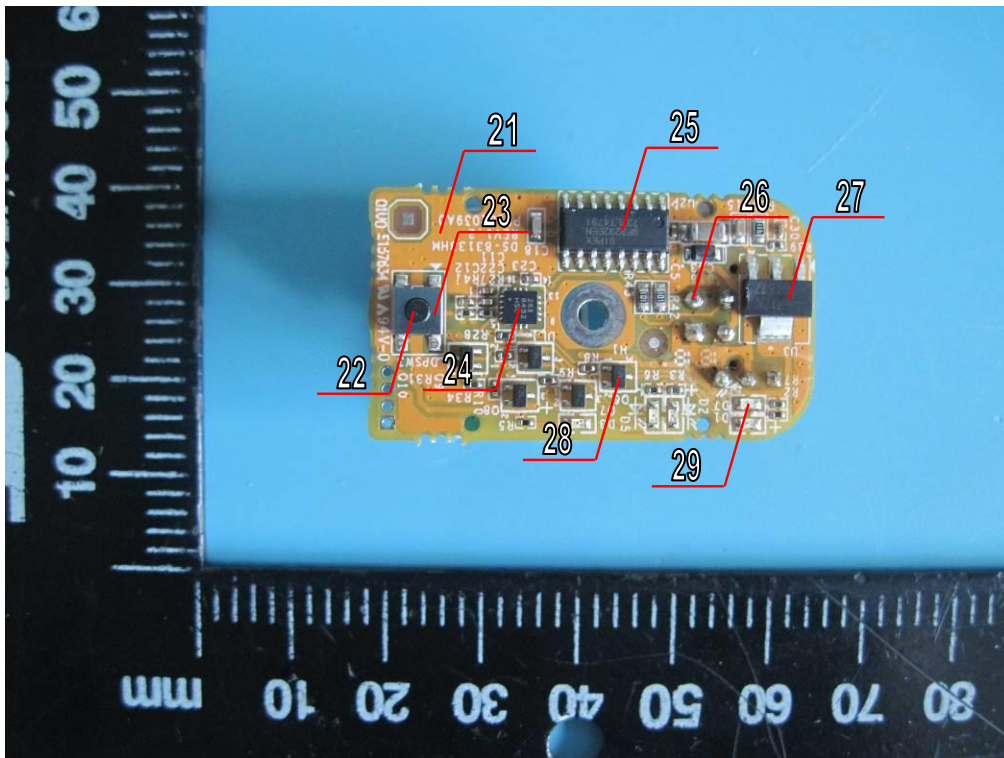
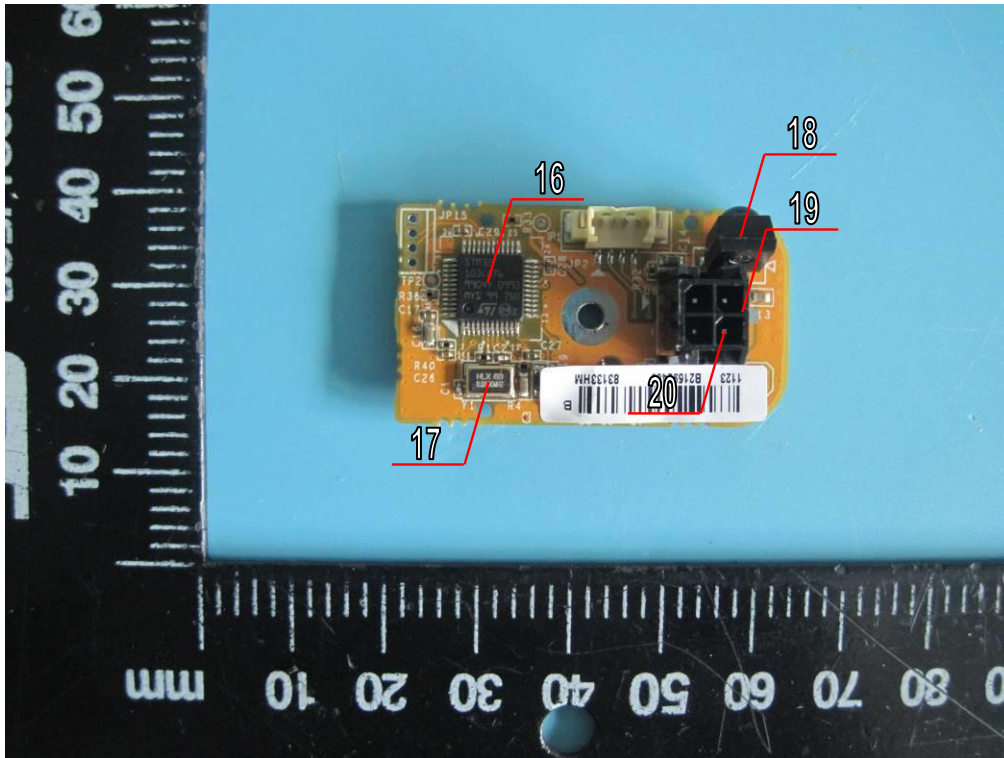
Sample Photo(s):

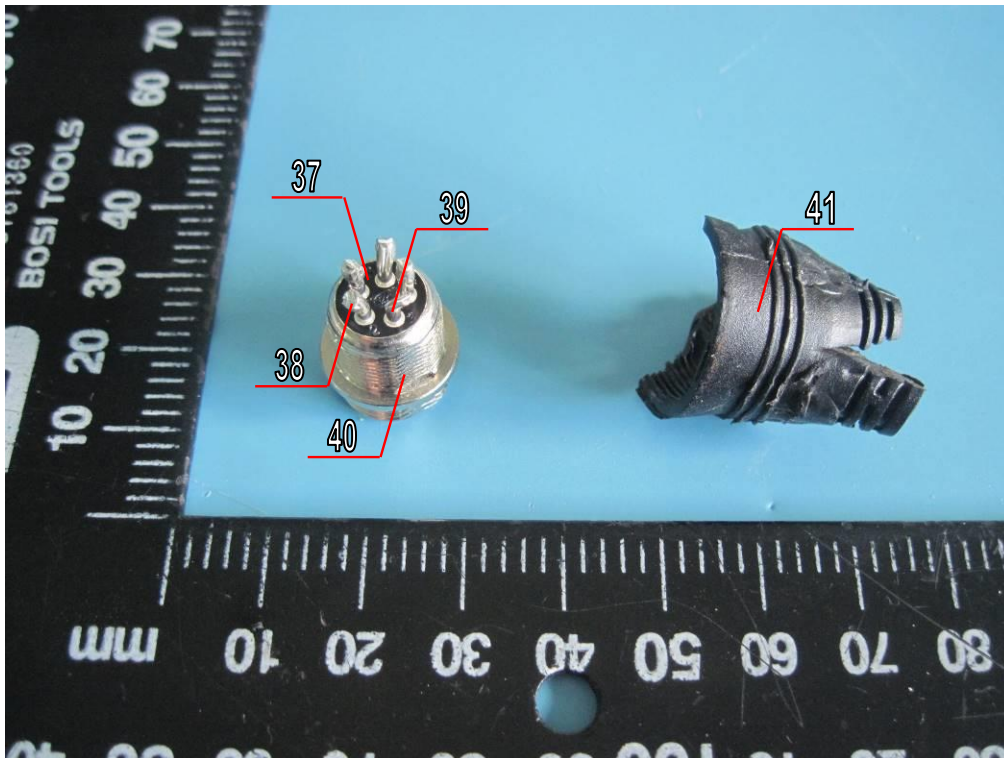
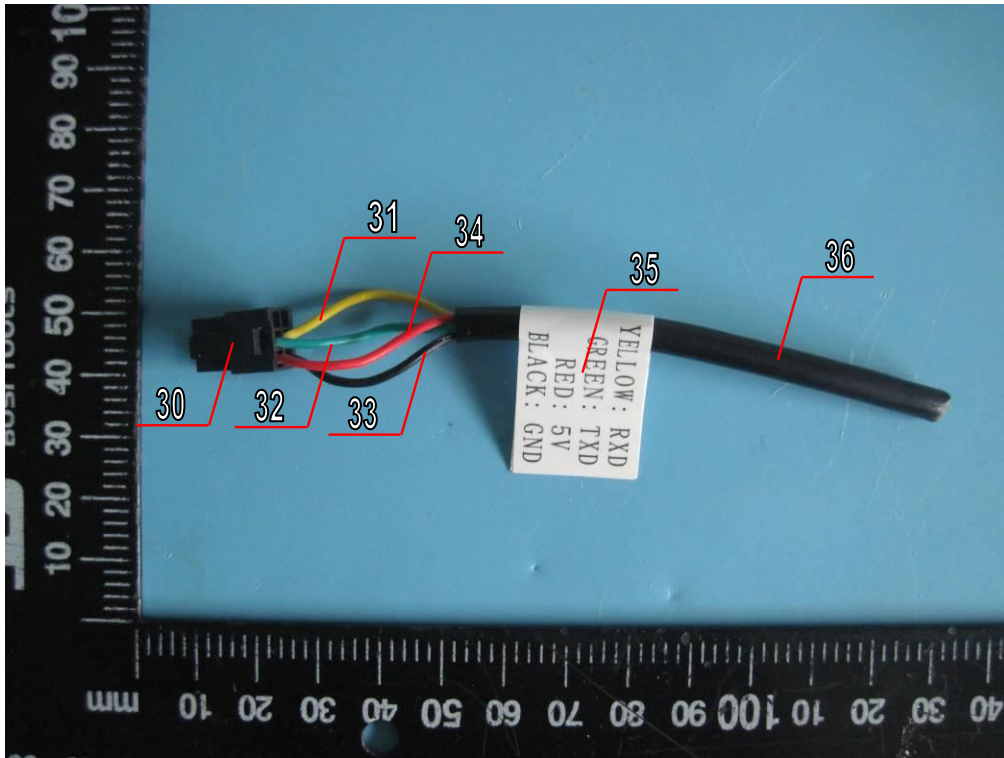


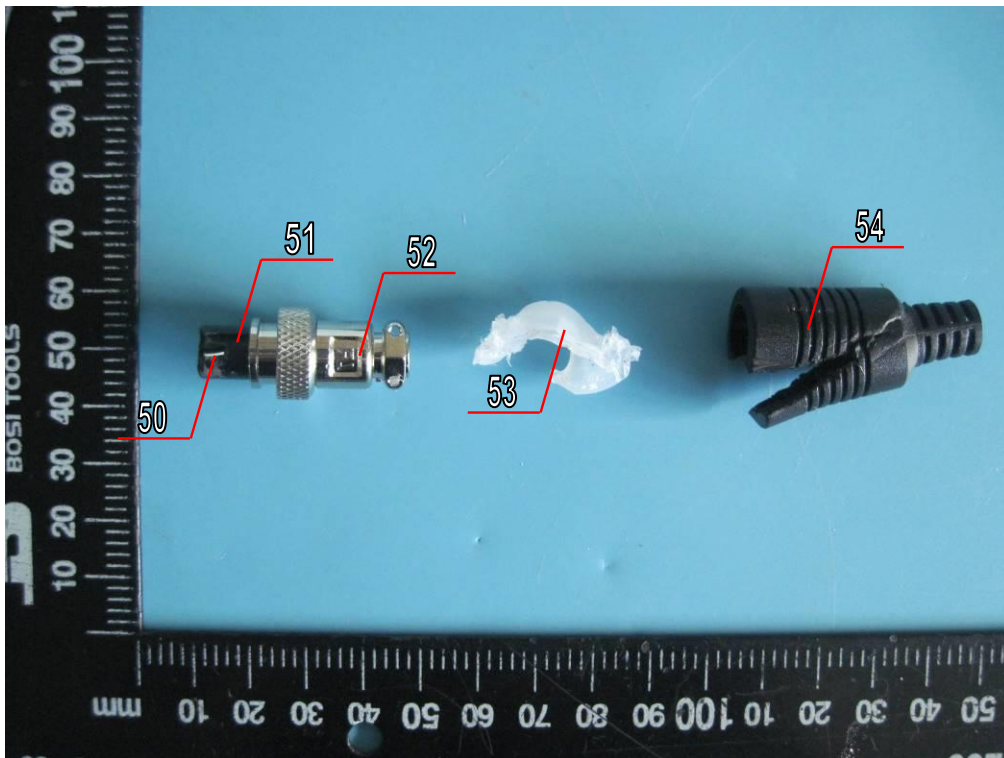
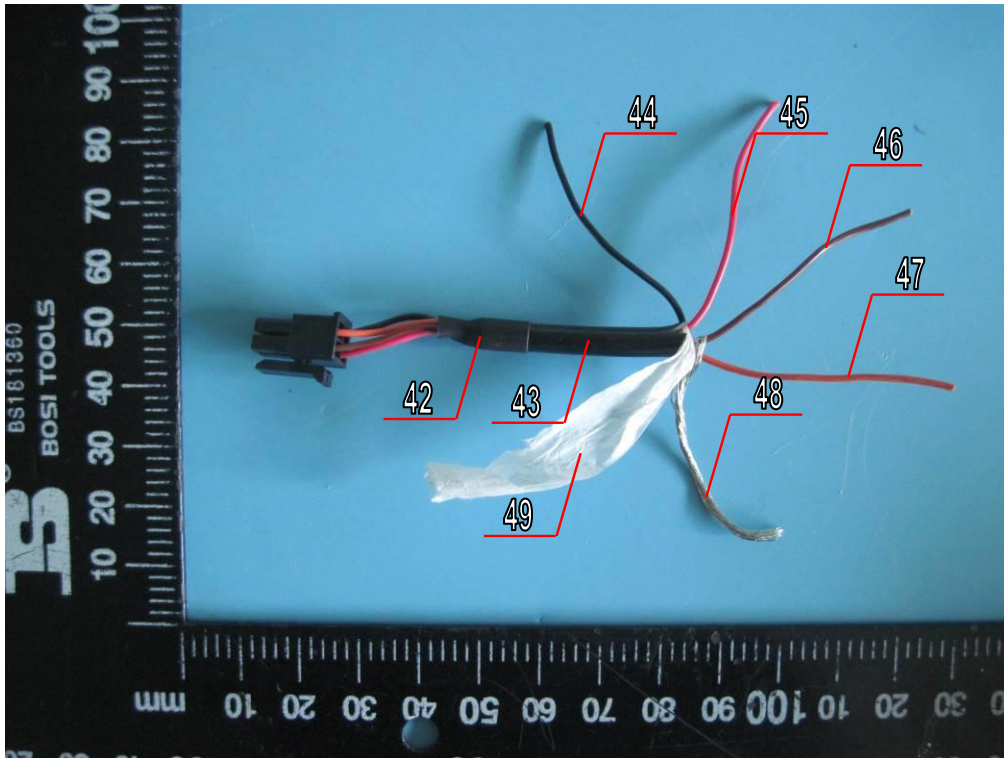
Test item: PANIC BUTTON
Tested Model: DS-1530HMI

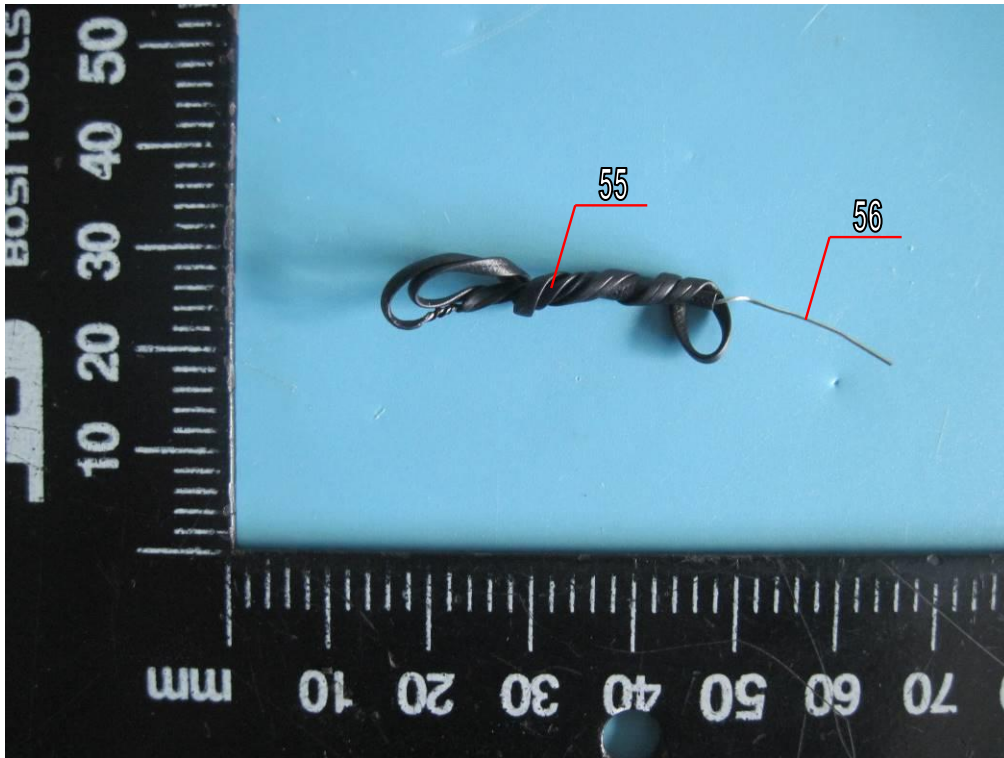












****End of Report****