

TEST REPORT

 CTK Co., Ltd. The Power Leader of Global Regulatory Certification	CTK Co., Ltd. (Ho-dong) 113, Yejik-ro, Cheoin-gu, Yongin-shi Gyeonggi-do KOREA, REPUBLIC OF Tel: +82-31-339-9970 Fax: +82-31-624-9501	REPORT No.: CTK-2019-03437 Page (1) / (10) pages	
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1. Applicant

- Name : Hanwha Techwin Co., Ltd.
- Address : Hanwha Techwin R&D center, 6 Pangyo-ro 319Beon-gil,
Bundang-gu, Seongnam-si, Gyeonggi-do, 13488 KOREA
- Date of Receipt..... : 2019-08-08

2. Manufacturer

- Name : HANWHA TECHWIN (TIANJIN) CO.,LTD.
- Address..... : No.11 Weiliu Rd, Micro-Electronic Industrial
Park, TEDA, Tianjin, 300385, People's Republic of China

3. Use of Report : Quality control

4. Test sample / Model..... : THERMAL CAMERA / TNO-3030T

5. Date(s) of test : 2019-08-08 to 2019-08-25

6. Test Standard (Method) used .. : KS C IEC 62262: 2005

7. Testing Environment : Temperature : (25.0 ± 10.0) °C, Humidity : (50 ± 25) %R.H.
Air Pressure: (96.0 ± 10.0) kPa

8. Results : Reference test results

The results shown in this test report refer only to the sample(s) tested unless otherwise stated.
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Approval	Tested by: WonHyeon Choi  (Signature)	Technical Manager: YenHwang Jung  (Signature)
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CTK Co., Ltd.

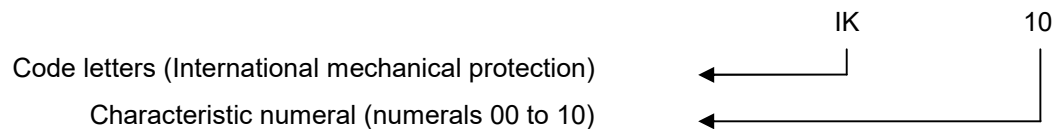


2019-08-30

1. Degrees of protection provided by enclosures for electrical equipment against external mechanical impacts (IK code)

1.1 Test standard: KS C IEC 62262: 2005

1.2 Arrangement of the IK code



1.3 Vertical Hammer

1.3.1 Test equipment

Equipment	Model	Manufacturer	Serial
Vertical Hammer	50J	Kingpo	TX028-4

1.3.2 Test condition

IK code	Impact Energy (J)	Equivalent mass (kg)	Drop height (mm ± 1%)	Application
00	Non-protected	-	-	☐
01	0.14	0.25	56	☐
02	0.20	0.25	80	☐
03	0.35	0.25	140	☐
04	0.50	0.25	200	☐
05	0.70	0.25	280	☐
06	1.00	0.25	400	☐
07	2.00	0.50	400	☐
08	5.00	1.70	300	☐
09	10.00	5.00	200	☐
10	20.00	5.00	400	☐
10(Customer request)	50.00	10.00	500	☒
- Impact times: five times for each of the exposed surface. (Do not impact more than 3 times in the same spot) - Test with impact energy of 50 J according to customer's demand				

1.3.3 Check Item

- External protection Enclosure damage check (except accessories not related to outer protection function)

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1.3.4 Test Result

Item	Contents	Result
External protection Enclosure	No damage	Pass
Comment Some scratches were generated on the outside of the product.		

Manufacturer's name

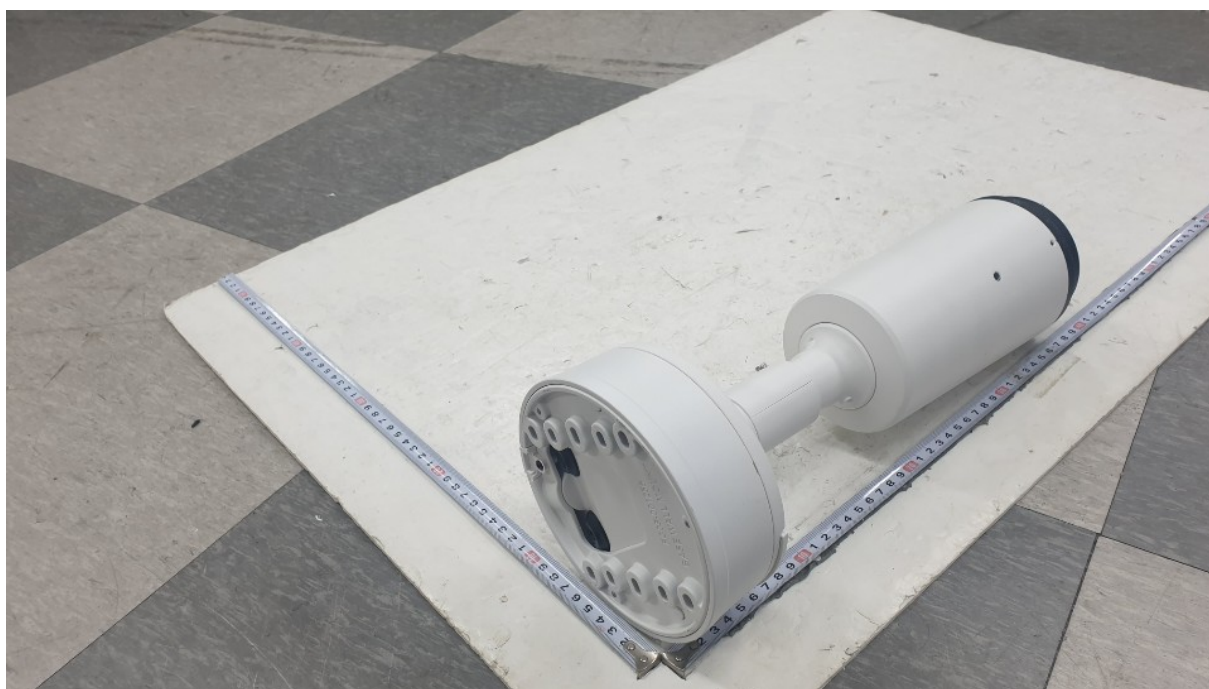
Name and address of factory (ies)	1) HANWHA TECHWIN (TIANJIN) CO.,LTD. No.11 Weiliu Rd, Micro-Electronic Industrial Park, TEDA, Tianjin, 300385, People's Republic of China 2) D-TECH CO.,LTD. 173-25, Saneop-ro, Gwonseon-gu, Suwon-si, Gyeonggi-do, Korea (Suwon Industrial Complex) 3) HANWHA TECHWIN SECURITY VIETNAM CO.,LTD Lot O-2, Que Vo Industrial Zone extended area, Nam Son commune, Bac Ninh city, Bac Ninh province, Vietnam
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Model description

Basic Model	TNO-3030T
Series model	TNO-3010T, TNO-3020T, TNO-3010TRA, TNO-3020TRA
Model differences	Use of the same external shape and materials (case, finishing material, PCB, cable, etc.), differences in electronic parts inside the product.

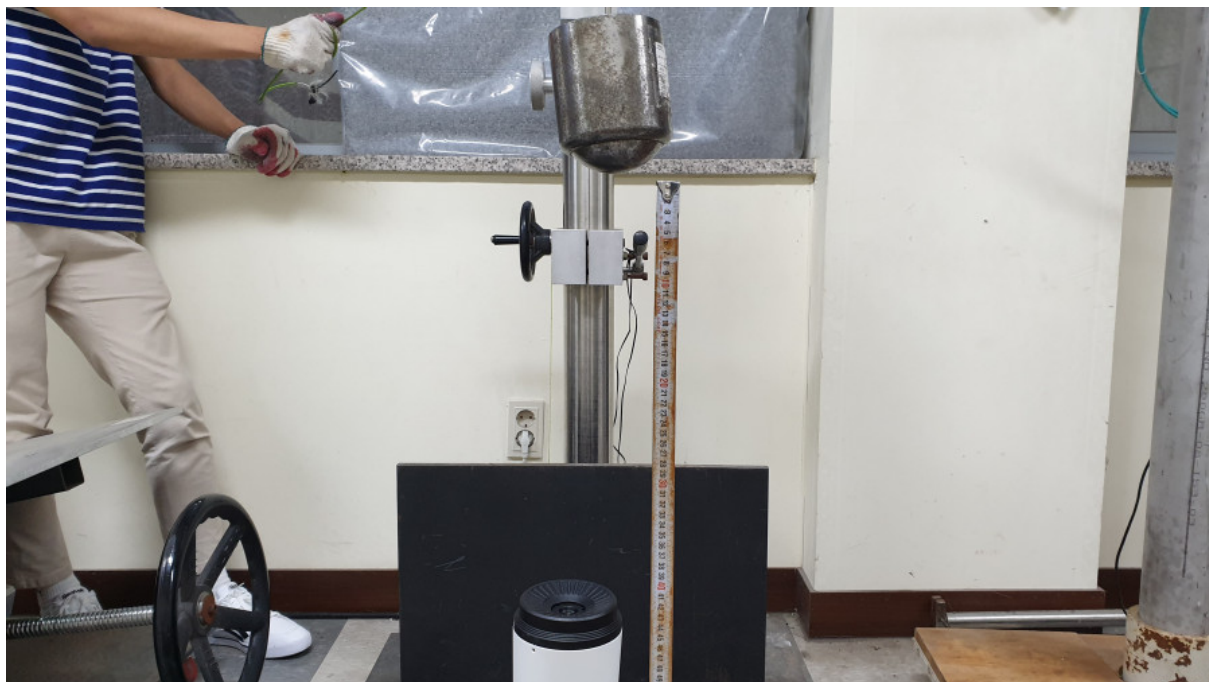
2. Attachment

2.1 Products



2.2 Test photos





2.3 Photos after test



2.4 Enclosure Dimensions or Impact point (Unit: mm)

