

# TEST REPORT

 <b>CTK Co., Ltd.</b> <small>The Power Leader of Global Regulatory Certification</small>	<b>CTK Co., Ltd.</b> (Ho-dong) 113, Yejik-ro, Cheoin-gu, Yongin-shi Gyeonggi-do KOREA, REPUBLIC OF Tel: +82-31-339-9970 Fax: +82-31-624-9501	<b>REPORT No.:</b> CTK-2019-00185 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.....: 2017-10-26

## 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-4040T\* (\*N:NT/P:PAL)

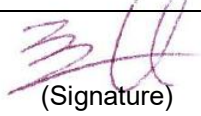

5. Date(s) of test .....: 2017-12-21

6. Test Standard (Method) used ...: Requested Test Specification of Applicant

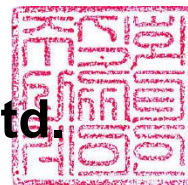
7. Testing Environment .....: Temperature : (25.0 ± 10.0) °C, Humidity : (50 ± 25) %R.H.  
Air Pressure: (99.0 ± 2) kPa

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.**

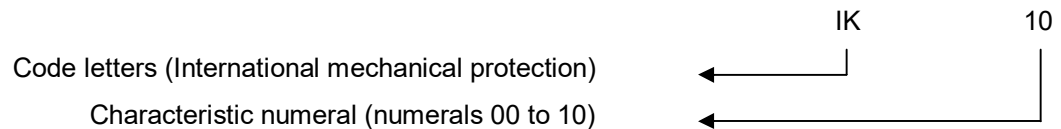


2019-01-16

## 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	20J	Kingpo	TX028-1


#### 1.3.2 Test condition

IK code	Impact Energy (J)	Equivalent mass (kg)	Drop height (mm ± 1%)	Application
00	Non-protected	-	-	<input type="checkbox"/>
01	0.14	0.25	56	<input type="checkbox"/>
02	0.20	0.25	80	<input type="checkbox"/>
03	0.35	0.25	140	<input type="checkbox"/>
04	0.50	0.25	200	<input type="checkbox"/>
05	0.70	0.25	280	<input type="checkbox"/>
06	1.00	0.25	400	<input type="checkbox"/>
07	2.00	0.50	400	<input type="checkbox"/>
08	5.00	1.70	300	<input type="checkbox"/>
09	10.00	5.00	200	<input type="checkbox"/>
10	20.00	5.00	400	<input checked="" type="checkbox"/>

- Impact times: five times for each of the exposed surface. (Do not impact more than 3 times in the same spot)

#### 1.3.3 Check Item

- Check the separation of the component.
- Check the visual damage of the product outside.

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### 1.3.5 Test Result

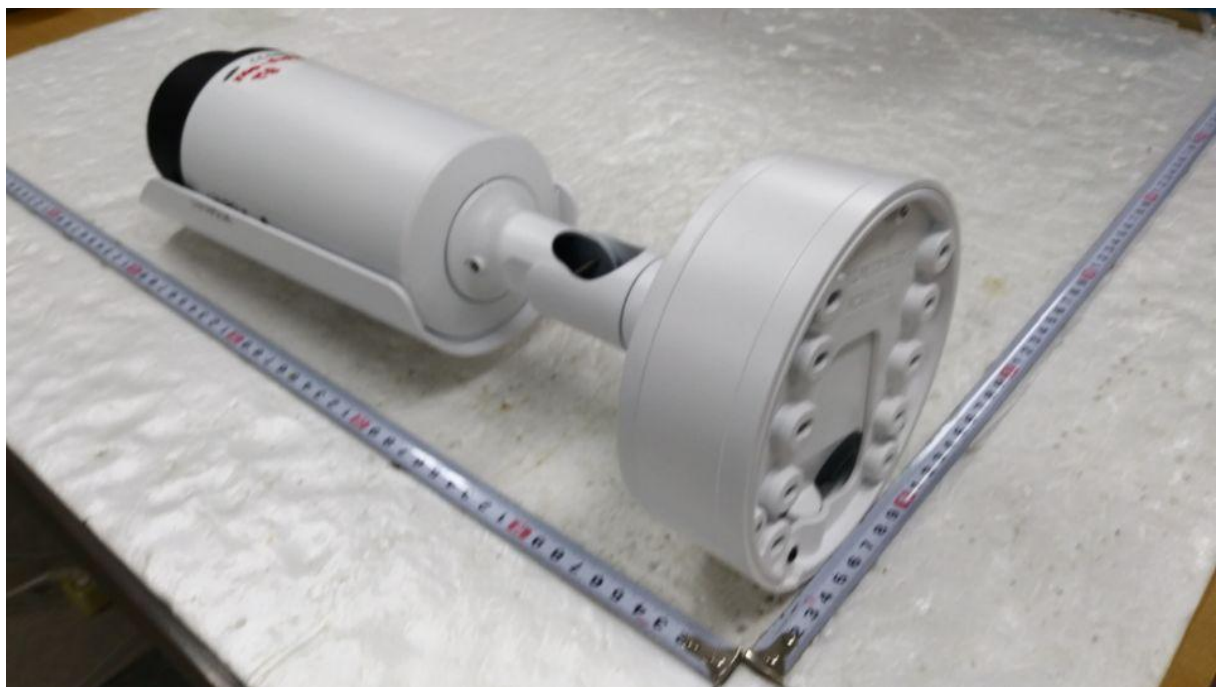
Characteristic numeral	Remark
IK 10	The enclosure is scratch

### Model description

Basic Model .....	TNO-4040T* (*N:NT/P:PAL)
Series model .....	TNO-4040TR, TNO-4030T, TNO-4030TR
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



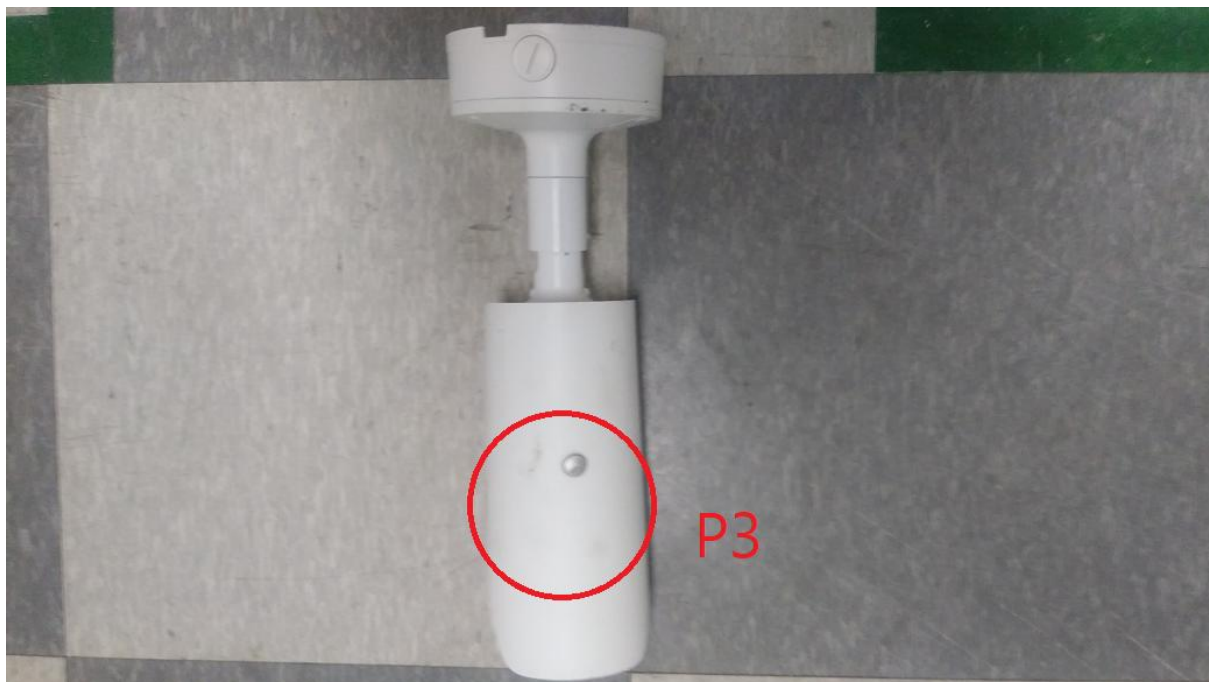
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## 2.3 Photos after test

[P1, P2]



[P3]





[P4, P5]



## 2.4 Enclosure Dimensions or Impact point (Unit: mm)

