

TEST REPORT

**CTK Co., Ltd.**

5 Dongbu-ro 221beon-gil, Cheoin-gu, Yongin-si,
Gyeonggi-do, Republic of Korea
Tel: +82-31-339-9970
Fax: +82-31-624-9501

REPORT No.:
CTK-2025-02346
Page (1) / (13) pages

1. Applicant

- Name : Hanwha Vision Co., Ltd
- Address : 6 Pangyo-ro 319Beon-gil, Bundang-gu, Seongnam-si,
Gyeonggi-do, 13488 Republic of Korea
- Date of Receipt : Aug. 13, 2025

2. Manufacturer

- Name : Hanwha Vision Co., Ltd

3. Use of Report :

For submission to customer

4. Test sample / Model :

IP Controller / NHP-P400

5. Date(s) of test :

Aug 20, 2025

6. Test Standard (Method) used :

IEC 62262:2002+AMD1:2021

7. Testing Environment :

Temperature: (25 ±10) °C, Humidity: (50 ±25) % R.H.

Pressure: (96 ±10) kPa

8. Test Results :

Refer to the test results

9. Location of Test :

☒ Permanent Testing Lab ☐ On Site Testing
(5 Dongbu-ro 221beon-gil, Cheoin-gu, Yongin-si, Gyeonggi-do, Republic of Korea)

The results shown in this test report refer only to the sample(s) tested unless otherwise stated. This report cannot be reproduced or copied without the written consent of CTK.

Approval	Tested by	Technical Manager
	Name: HyungUk Jeon (Signature) 	Name: HoHyun Lee (Signature) 

Remark. This report is not related to KOLAS accreditation and relevant regulation.

Aug. 29 , 2025

CTK Co., Ltd.



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REPORT No.:
CTK-2025-02346
Page (2) / (13) pages

Table of Contents

1. Testing laboratory	3
1.1 Testing laboratory information	3
1.2 Testing laboratory accreditation status	3
2. Product description and equipment information	4
2.1 Product description	4
2.2 Equipment information	4
2.3 Pre-test product images	5
2.4 Testing equipment images	6
3. Degrees of protection provided by enclosures for electrical equipment against external mechanical impacts (IK code)	7
3.1 Test date and environmental conditions	7
3.2 Test condition	7
3.3 Testing images	8
3.4 Test result	9
3.5 Post-test product images and hit area images	10
3.6 Enclosure Dimensions or Impact point	13

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REPORT No.:
CTK-2025-02346
Page (3) / (13) pages

1. Testing laboratory

1.1 Testing laboratory information

Lab. Name	CTK Co., Ltd.
Representative	Young Joseph Seungwon
Address	5 Dongbu-ro 221beon-gil, Cheoin-gu, Yongin-si, Gyeonggi-do, Republic of Korea
Tel.	+82-31-339-9970
Fax.	+82-31-624-9501
E-Mail	all.youngin@element.com
Website	www.elementkorea.kr

1.2 Testing laboratory accreditation status

Country	Classification	Accreditation Number	Logo
International	KOLAS	TESTING NO. KT119	

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REPORT No.:
CTK-2025-02346
Page (4) / (13) pages

2. Product description and equipment information

2.1 Product description

Product Name	Model Name	Quantity	Comment
IP Controller	NHP-P400	1 EA	-

2.2 Equipment information

Testing equipment	Model Name	Manufacturer	Manufacturing Number	Next Cal. Date
Vertical Hammer Tester	Vertical Hammer	Kingpo	0190605A01002	-
Vertical Hammer	20J	Kingpo	TX028-3	-
Steel measuring meter	5.5 m	KOMELON	225851	Jan. 16, 2026



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REPORT No.:
CTK-2025-02346
Page (5) / (13) pages

2.3 Pre-test product images

2.3.1 Test sample [Red-marked items are not subject to testing]



Top



Bottom



Front



Rear



Left side



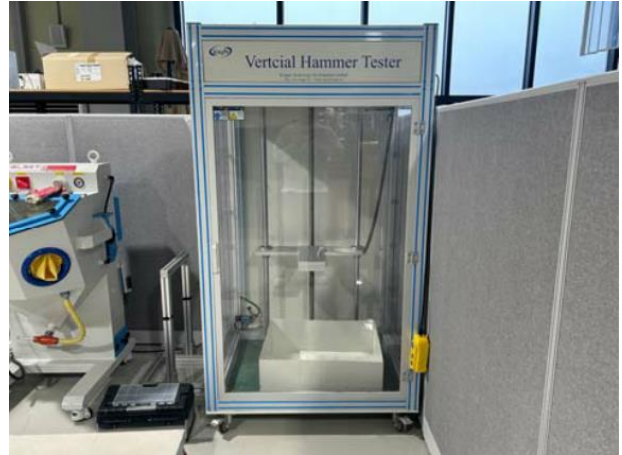
Right side

2.4 Testing equipment images

2.4.1 Test equipment



Vertical Hammer



Vertical Hammer Tester



Steel measuring meter

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REPORT No.:
CTK-2025-02346
Page (7) / (13) pages

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

3.1 Test date and environmental conditions

3.1.1 Test date: Aug 20, 2025

3.1.2 Measured Environmental Conditions

Item	Temperature (°C)	Humidity (% R.H.)	Pressure (kPa)
Measurement	24.2	51.6	101.8

3.2 Test condition

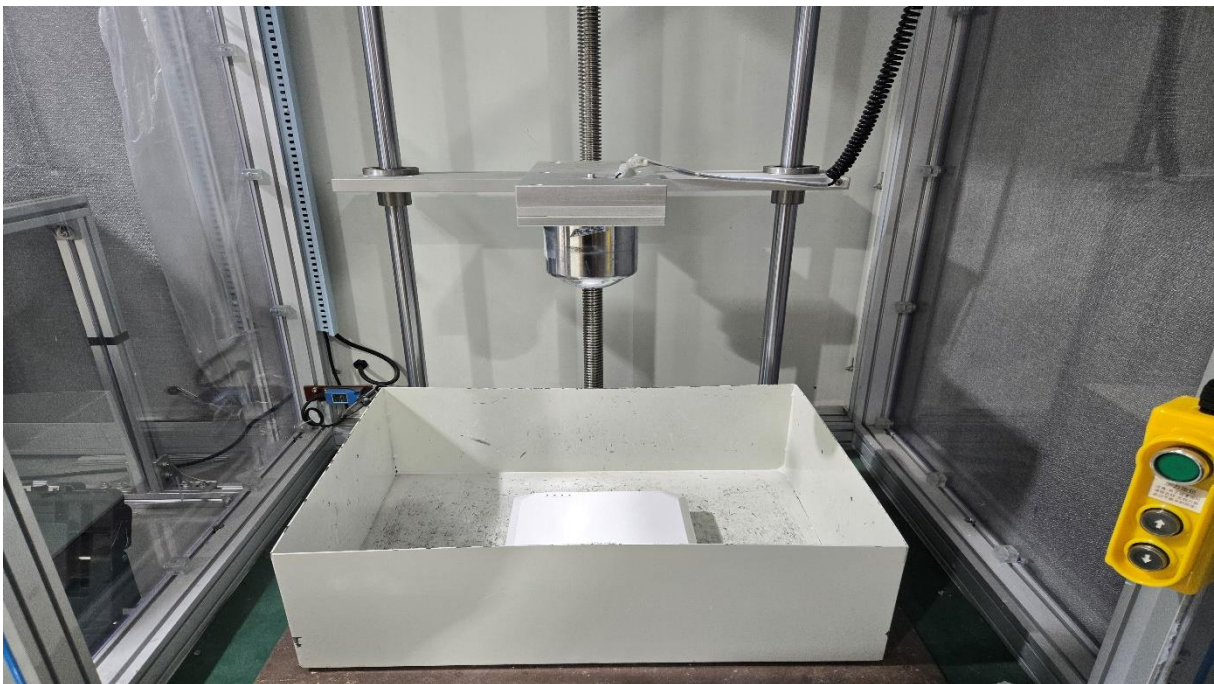
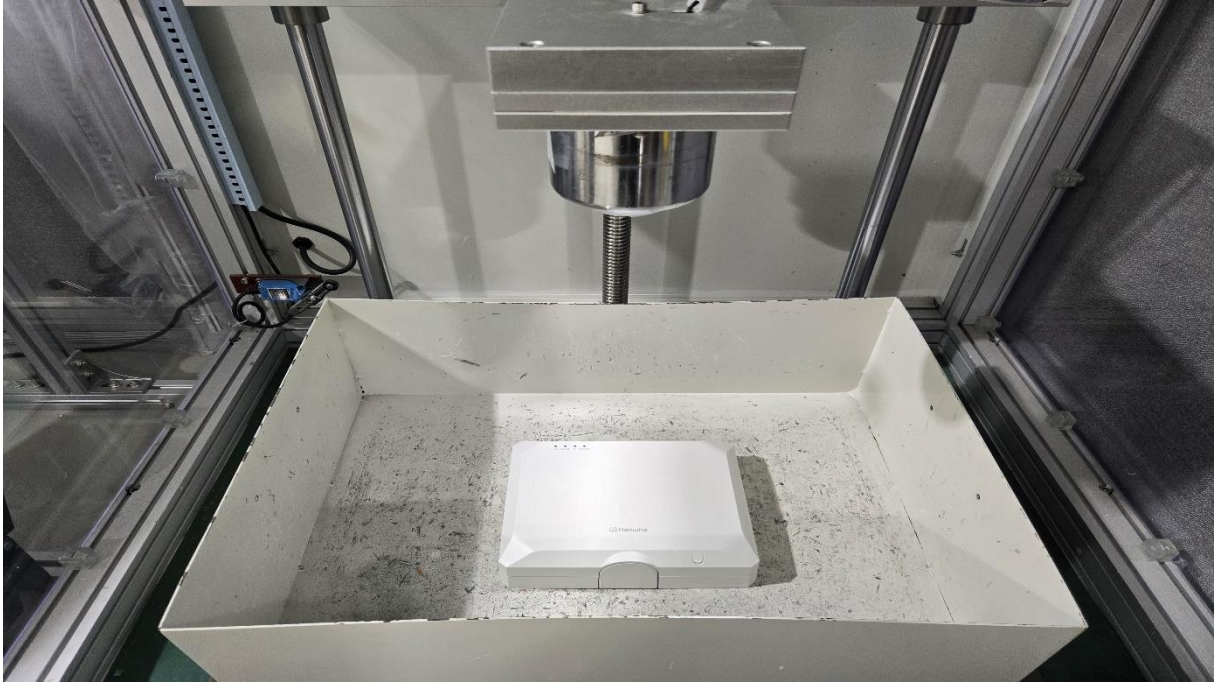
3.2.1 Test standard: IEC 62262:2002+AMD1:2021

IK code	Impact Energy (J)	Equivalent mass (kg)	Drop height (mm $\pm$ 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	☒
11	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)

3.3 Testing images

3.3.1 Evidence of test setting



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REPORT No.:
CTK-2025-02346
Page (9) / (13) pages

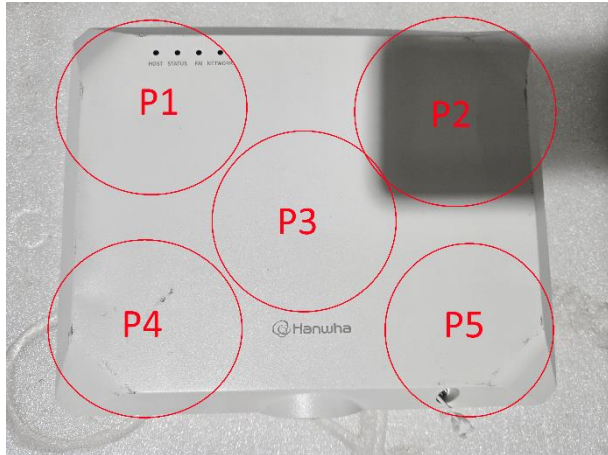
3.4 Test result**3.4.1 Test result table**

Evaluation Criteria	Test Results	Remark
Visual Inspection	Some Crack and gap were generated on the outside of the product. Separation of the internal terminal block occurred, with no functional issues or abnormalities.	-

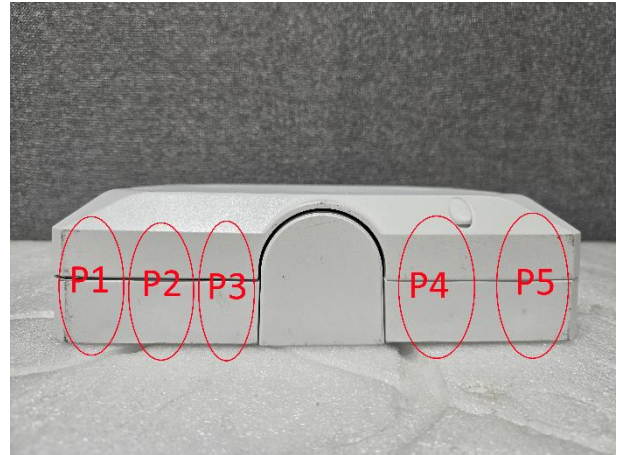
※ Refer to the product photos after the completion of testing in section 3.5.2

3.5 Post-test product images and hit area images

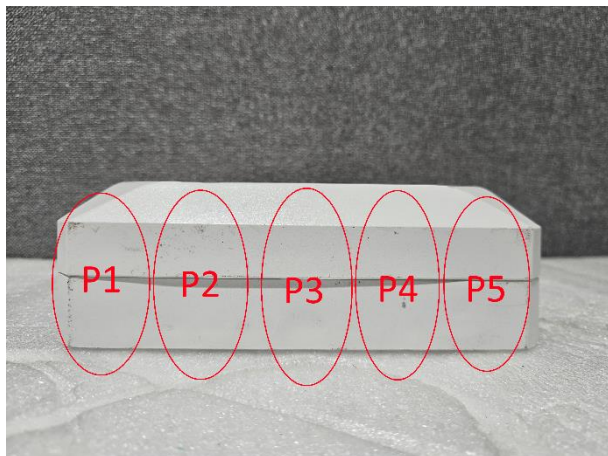
3.5.1 Check the hit area during the test (1)



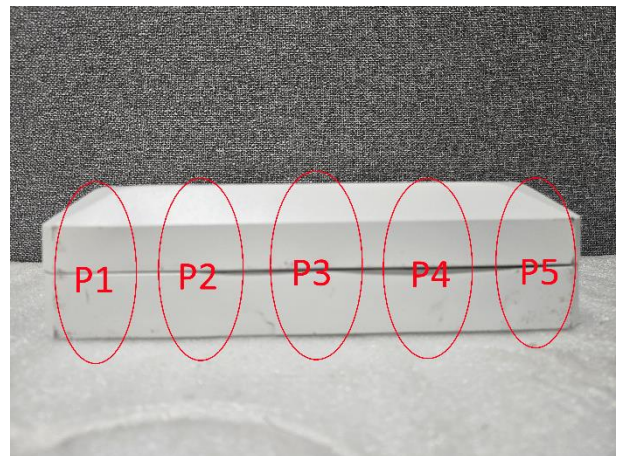
Check the hit area the test_1



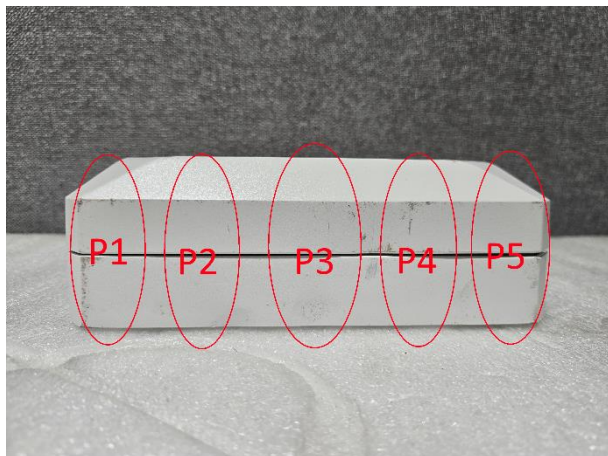
Check the hit area the test_2



Check the hit area the test_3



Check the hit area the test_4



Check the hit area the test_5



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CTK-2025-02346
Page (11) / (13) pages

3.5.2 Post-test product images



Top



Bottom



Front



Back



Left side



Right side



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REPORT No.:
CTK-2025-02346
Page (12) / (13) pages

3.5.3 Post-test product images



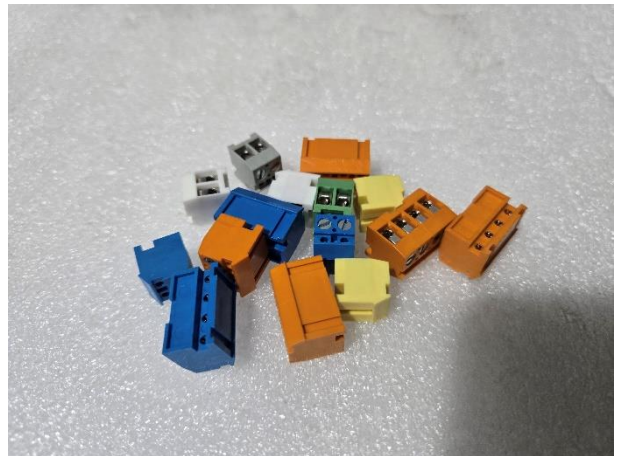
Gap occurrence Photo



Gap occurrence Photo



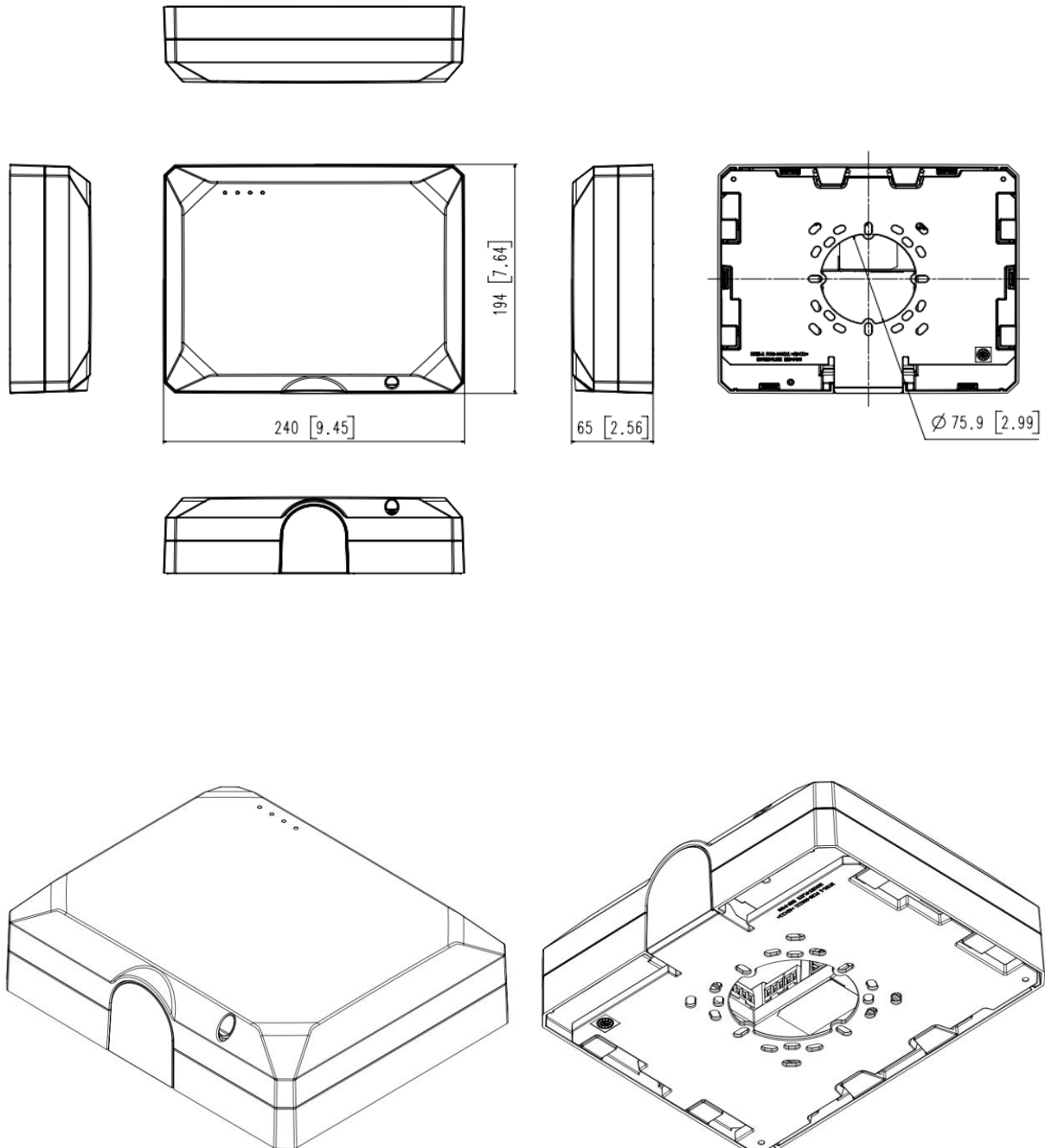
crack occurrence Photo



Terminal block separation image

3.6 Enclosure Dimensions or Impact point

3.6.1 Enclosure Dimensions (Unit: mm)



- End -