

Test Report



Korea Marine Equipment Research Institute

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Report No. :

KOMERI-0314-23T1309(E)

http://www.komeri.re.kr



1. Applicant

- Company Name : INDUSVISION
- Address : 203-704 388, Songnae-daero, Bucheon-si, Gyeonggi-do, Republic of Korea



2. Equipment under Test

- Name of Product : UNDER WATER NETWORK CAMERA
- Model : iAQUA-2000, iAQUA-200Z, iAQUA-200F, iAQUA-2100, iAQUA-210Z, iAQUA-210F, iAQUA-2200, iAQUA-220Z, iAQUA-220F
- Serial No. : -

3. Test Standards : IEC 60529:1989+AMD1:1999+AMD2:2013 Degrees of protection provided by enclosures (IP CODE)

4. Test Period : 2023. 05. 24 ~ 2023. 05. 26

5. Test Site : Permanent Testing Lab On Site Testing
(Address : 24-20, Noksansandan 335-ro, Gangseo-gu, Busan 46754, Republic of Korea)

6. Test Result : Conformity(IPX8)

Note 1. The information of the sample(s) in this test report is provided by the applicant. And you can check website (www.g4bgo.kr) to verify the authenticity of the certificate.
Note 2. The result shown in this test report are only limited in to the samples provided by the applicant and do not guarantee the quality of all products of the applicant.
Note 3. This test report shall be used only within the purpose of its defined use and shall not be used for public relation, advertisement and lawsuit.

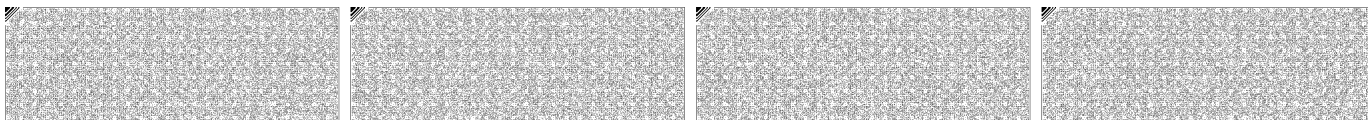
Affirmation	Tested by	Technical Manager
	Name : Sang-Jin LEE (Signature)	Name : Myeong-Gwan HAN (Signature)

This test report is the accredited test results by Korea Laboratory Accreditation Scheme, which signed the ILAC-MRA and related to KS Q ISO/IEC 17025 and KOLAS accreditation.

Date of issue : 2023. 08. 09.

Accredited by KOLAS, Republic of KOREA

The President of Korea Marine Equipment Research Institute (Signature)





■ GENERAL

※ Test condition	Status	Note
opened without the use of a key or tool	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
be used additional material for degrees of protection	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
not exceeded a rated voltage of 72.5 kV	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
be charged or operated during the test	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	

■ ADDITIONAL TEST INFORMATION

- Epoxy molding is applied to the internal cable connector part for sealing in this test. (Refer to ATTACHMENT)
- This EUT uses the same enclosure, but the model is classified according to the applied lens and internal module.

Model	Applied lens	Internal module
iAQUA-2000	normal lens	2 mega pixel
iAQUA-200Z	zoom lens	2 mega pixel
iAQUA-200F	fixed lens	2 mega pixel
iAQUA-2100	normal lens	5 mega pixel
iAQUA-210Z	zoom lens	5 mega pixel
iAQUA-210F	fixed lens	5 mega pixel
iAQUA-2200	normal lens	8 mega pixel
iAQUA-220Z	zoom lens	8 mega pixel
iAQUA-220F	fixed lens	8 mega pixel

NOTE 1) The recommended atmospheric conditions during the tests

Temperature : (15 ~ 35) °C, Humidity : (25 ~ 75) % R.H., Atmospheric pressure : (86 ~ 106) kPa

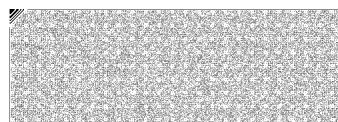
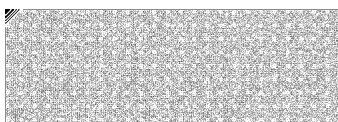
NOTE 2) EUT installation

Unless otherwise specified in a relevant product standard, the test samples for each test shall be a clean and new condition, with all parts in place and mounted in the manner stated by the manufacturer.

NOTE 3) Empty enclosures

If the enclosure is tested without equipment inside, detailed requirements shall be indicated by the enclosure manufacturer in his instructions for the arrangement and spacing of hazardous parts or parts which might be affected by the penetration of foreign objects or water.

The manufacturer of the final assembly shall ensure that after the electrical equipment is enclosed the enclosure meets the declared degree of protection of the final product.





1. IP TEST

1.1 TEST STANDARD

- IEC 60529:1989+AMD1:1999+AMD2:2013 Degrees of protection provided by enclosures (IP CODE)

1.2 TEST RESULTS

Table 1-1 Protection against water

Test item	Criterion	Result
IPX8	<ul style="list-style-type: none"> · Test pressure : 1 000 kPa ※ Test conditions are provided by applicant ※ 100 kPa = 1 bar = 0.98 atm = depth of water 10 m · Test duration : 48 hours. · After test, the enclosure shall be inspected for ingress of water. ※ In general, if any water has entered, it shall not <ul style="list-style-type: none"> · be sufficient to interfere with the correct operation of the equipment or impair safety · deposit on insulation parts where it could lead to tracking along the creepage distances · accumulate near the cable end or enter the cable if any · If the enclosure is provided with drain-holes, it should be proved by inspection that any water which enters does not accumulate and that it drains away without doing any harm to the equipment. · For enclosures without drain-holes, the relevant product standard shall specify the acceptance conditions if water can accumulate to reach live parts. 	Water did not penetrate into the enclosure.

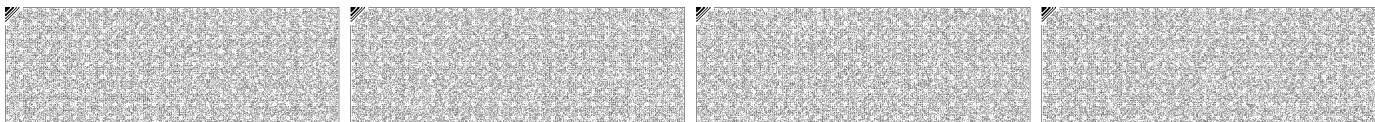
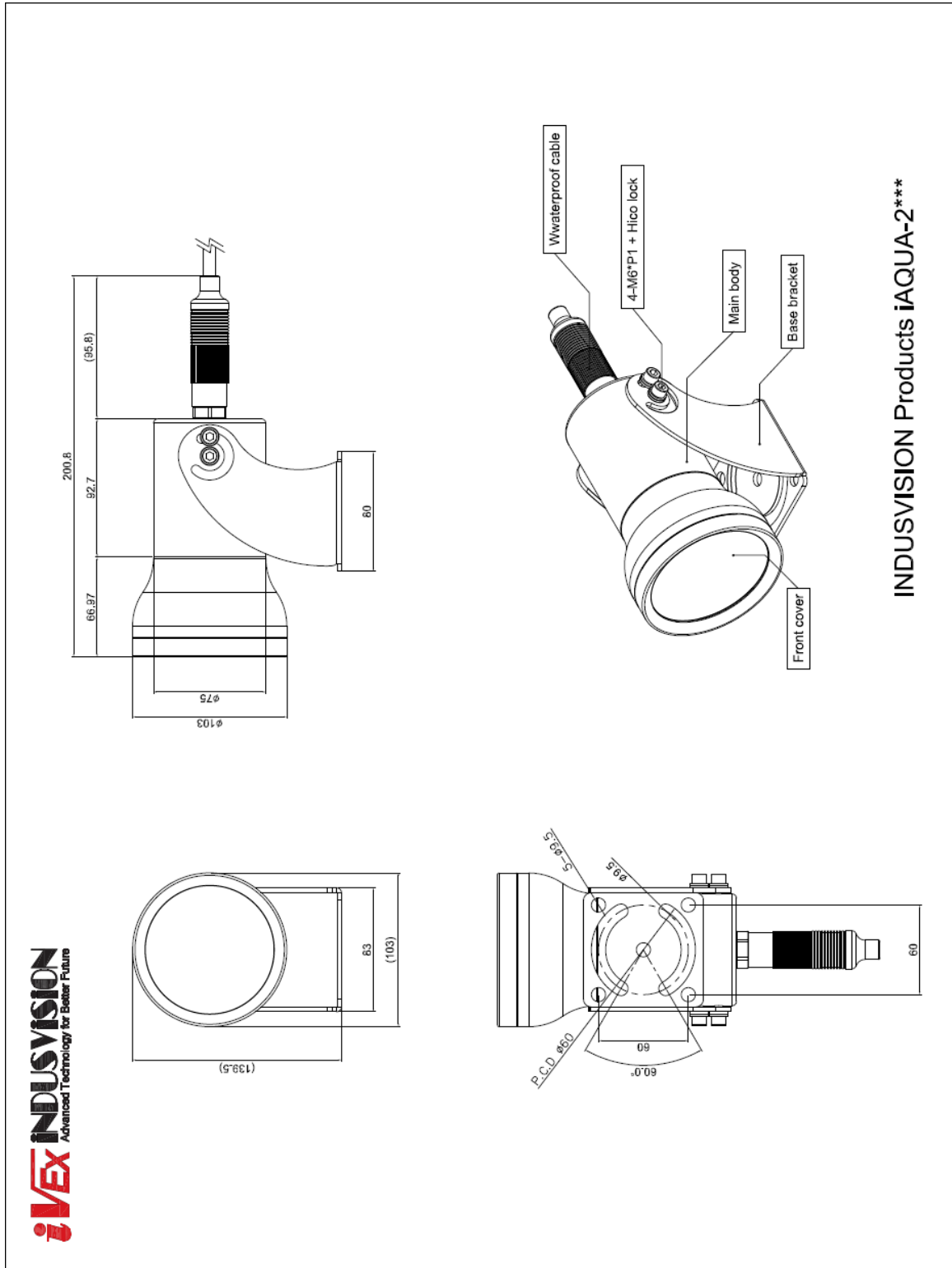
※ the water temperature should not differ by more than 5 K from the temperature of the EUT

-The end-





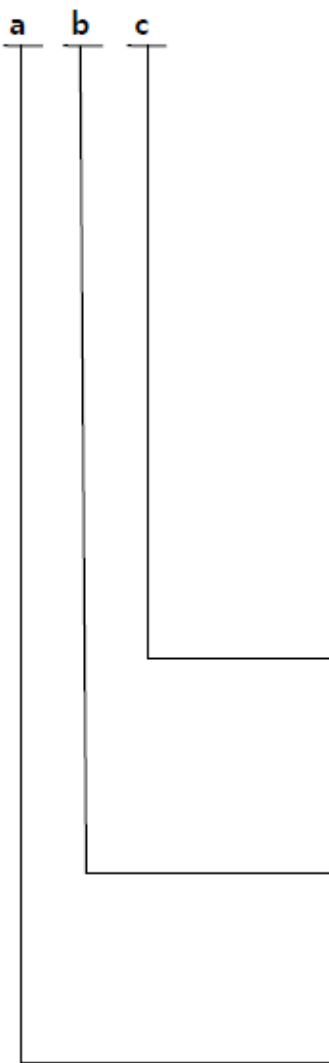
ATTACHMENT I. DRAWING





Model Type Division

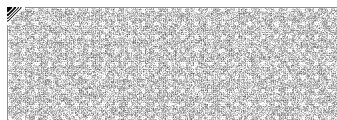
iAQUA - 2



0 : Normal
 Z : Zoom lens
 F : Fixed lens

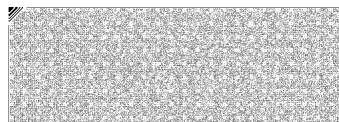
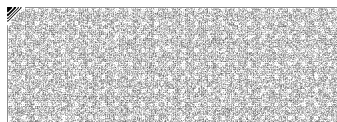
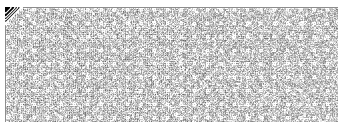
0. Blank
 1. Blank

0 : 2Mega Pixel
 1 : 5Mega Pixel
 2 : 8Mega Pixel





■ ATTACHMENT II. TEST RESULT





■ ATTACHMENT III. RAW DATA

File Message : 000792_230524_143530.DAE.... 000794_230526_143530.DAE
 File Name : 000792_230524_143530.DAE.... 000794_230526_143530.DAE
 Device Type : MW1000
 Serial No. : SSM107257
 Time Correction : None
 Starting Condition : Manual
 Dividing Condition : Manual
 Mess Ch. : 24
 Math Ch. : 0
 Ext Ch. : 0
 Data Count : 173708
 Sampling Interval : 1.000 s
 Start Time : 2023/05/24 14:35:30.000
 Stop Time : 2023/05/26 14:50:37.000
 Trigger Time : 2023/05/26 14:50:37.000
 Trigger No. : 173707
 Damage Check : Not Damaged
 Started by : [Key In]
 Stopped by : [Key In]
 Printed Group : GROUP 1
 Printed Range : 2023/05/24 14:35:30.000 - 2023/05/26 14:50:37.000
 Comment :

1/1

