TEST REPORT

ktl 한국산업기술시험원 Korea Testing Laboratory

Report No. : 18-065095-01-2

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ilac-MRA KOLAS

1. Client

Name : GASDNA CO., LTD.

Address : B-602, 283, Bupyeong-daero, Bupyeong-gu, Incheon, Republic of Korea

Date of Receipt : 2018. 10. 17

2. Use of Report : To verify IP grade to IEC 60529

3. Test Sample

Description : Gas Detector

Manufacturer : GASDNA CO., LTD.

Model Name : DA-800

Serial Number : -

Remark : Please refer to the clause 1.4 regarding the test sample and results

4. Date of Test : 2018. 10. 26. ~ 2018. 10. 29.

5. Test Standard/Method : IEC 60529:1989 +AMD1:1999+AMD2:2013 CSV/COR2:2015

6. Testing Environment : Temperature : (20.7 ± 2.0) ℃, Humidity : (34 ± 2) % R.H.

7. Test Results : Pass (IP65)

Note : 1. This test results contained apply only to the test sample(s) supplied by the client, and it is prohibited to use for legal and other grounds of dispute
2. This test results is valid only for the original document, and arbitrary reprocessed copy and electronic prints are not valid.
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4. Items marked with an asterisk (*) are out of range of the KOLAS accreditation of KTL.

Affirmation	Tested by	Technical Manager
	Name : Chae Hui-dong (Signature)	Name : Min Yeong-seung (Signature)

The above test report is the accredited test result by Korea Laboratory Accreditation Scheme, which signed the ILAC-MRA.

2018. 10. 31

Korea Testing Laboratory

Accredited by KOLAS, Republic of KOREA

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1. Summary of Test

1.1 Test Standard

This test was conducted in accordance with "IEC 60529:1989 +AMD1:1999+AMD2:2013 CSV/COR2:2015".

1.2 Test Sample

- Description : Gas Detector
- Model Name : DA-800
- Dimensions : 220 mm × 198 mm × 127 mm

[Fig. 1: Front]

[Fig. 2: Inside]

1.3 Test Environment

- Temperature : (20.7 ± 2.0) ℃
- Humidity : (34 ± 2) % R.H.
- Atmospheric Pressure : (100.7 ± 2.0) kPa

1.4 Remark

The epoxy is uesd on the aluminium cover glass part(refer to the Fig. 2).

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2. Results

Code Letters	IP	Conditions	Results
1st Characteristic numerals Against ingress of solid foreign objects	6	**2.1 Dust Test Conditions** • Talcum powder(mesh) wire diameter: 50 μm • Talcum powder(mesh) wire width: 75 μm • Amount of talcum powder of the test chamber: 2 kg/m^3 **2.2 Dust Test Contents** • Volume of the enclosures: About 2100 cm^3 • Reduction air pressure: -2.00 kPa (-200 mmH_2O) • Flow rate: 0.01 L/min • Extraction rate per hour: 0.29 volumes/h • Test duration: 8 h	**Pass**
2nd Characteristic numerals Against ingress of water with harmful effects	5	**2.3 Water Test Conditions** • Internal diameter of the nozzle: 6.3 mm • Delivery rate: (12.5 ± 0.6) L/min • Core of the substantial stream: Circle of 40 mm diameter at 2.5 m distance from the nozzle • Distance from nozzle to enclosure surface: 2.8 m **2.4 Water Test Contents** • Test duration: 3 min	**Pass**

3. List of Testing Equipments

Equipment	Manufacture	Model	ICP No.	Date of Calibration	Calibration Laboratory
Thermo-hygrometer	TESTO	Testo 622	ICP20140892	2018. 05. 14	KTL
Verna Caliper	MITUTOYO	CD-20APX	ICP20160207	2018. 05. 17	KTL
Stopwatch	CASIO	HS-30W	ICP20142326	2017. 09. 27	KTL
Flow Meter (Nozzle)	KOMETER	GA-101	ICP20150325	2018. 04. 26	KOMETER
Flow Meter (Dust Chamber)	DWYER	RMA-13-SSV	ICP20150476	2018. 05. 22	KTL

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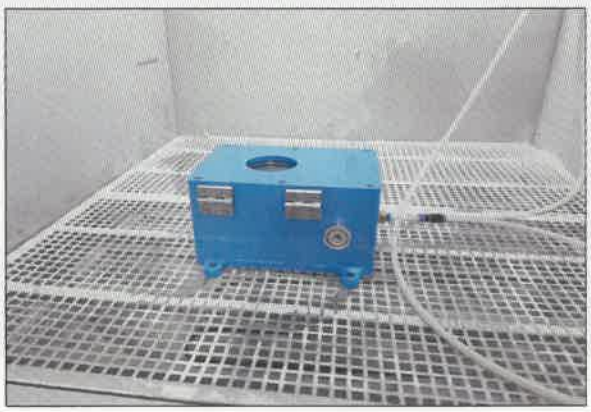
4. Test Figures



[Fig. 3: IP 6X]

[Fig. 4: IP X5]

- End -

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