

RF Exposure Evaluation Report

Report No.: JYTSZ-R12-2400500
Applicant: Ham-Let Singapore Valves & Fittings Pte Ltd
Address of Applicant: 8 Admiralty Street, #06-11, Admirax, Singapore 757438

Equipment Under Test (EUT)
Product Name: IOTH6000 WLS(DC Smart Valve)
Model No.: IOTH6000
Trade mark: N/A

FCC ID: 2A315-H6000
Applicable standards: FCC CFR Title 47 Part 2 (§2.1091)
Date of sample receipt: 07 May, 2024
Date of Test: 08 May, to 17 Jun., 2024
Date of report issue: 18 Jun., 2024
Test Result: PASS

Project by: _____

Date: 18 Jun., 2024

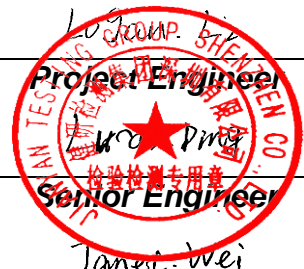
Reviewed by: _____

Date: 18 Jun., 2024

Approved by: _____

Date: 18 Jun., 2024

Manager



This equipment has been shown to be capable of compliance with the applicable technical standards as indicated in the measurement report and was tested in accordance with the measurement procedures specified in above the application standard version. Test results reported herein relate only to the item(s) tested.

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1 Version

Version No.	Date	Description
00	18 Jun., 2024	Original

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3 General Information

3.1 Client Information

Applicant:	Ham-Let Singapore Valves & Fittings Pte Ltd
Address:	8 Admiralty Street, #06-11, Admirax, Singapore 757438
Manufacturer/Factory:	Hamlet (Israel - Canada) Ltd
Address:	P.O. Box 824, Nazareth Illit, 1710801

3.2 General Description of E.U.T.

Product Name:	IOTH6000 WLS(DC Smart Valve)
Model No.:	IOTH6000
Operation Frequency:	125KHz Channel: 902.3-914.9MHz 500kHz Channel: 903-914.2MHz
Modulation technology:	LoRa
Antenna Type:	Monopole Antenna
Antenna gain:	2 dBi (declare by applicant)
Test Sample Condition:	The test samples were provided in good working order with no visible defects.

3.3 Operating Modes

Operating mode	Detail description
LoRa mode	Keep the EUT in continuously transmitting in LoRa mode

3.4 Additions to, deviations, or exclusions from the method

No

3.5 Laboratory Facility

The test facility is recognized, certified, or accredited by the following organizations:

● **FCC - Designation No.: CN1211**

JianYan Testing Group Shenzhen Co., Ltd. has been accredited as a testing laboratory by FCC(Federal Communications Commission). The test firm Registration No. is 727551.

● **ISED – CAB identifier.: CN0021**

The 3m Semi-anechoic chamber and 10m Semi-anechoic chamber of JianYan Testing Group Shenzhen Co., Ltd. has been Registered by Certification and Engineering Bureau of Industry Canada for radio equipment testing with Registration No.: 10106A-1.

● **CNAS - Registration No.: CNAS L15527**

JianYan Testing Group Shenzhen Co., Ltd. is accredited to ISO/IEC 17025:2017 General Requirements for the Competence of Testing and Calibration laboratories for the competence of testing. The Registration No. is CNAS L15527.

● **A2LA - Registration No.: 4346.01**

This laboratory is accredited in accordance with the recognized International Standard ISO/IEC 17025:2017 General requirements for the competence of testing and calibration laboratories. The test scope can be found as below link: <https://portal.a2la.org/scopepdf/4346-01.pdf>

3.6 Laboratory Location

JianYan Testing Group Shenzhen Co., Ltd.

Address: No.101, Building 8, Innovation Wisdom Port, No.155 Hongtian Road, Huangpu Community, Xinqiao Street, Bao'an District, Shenzhen, Guangdong, People's Republic of China.

Tel: +86-755-23118282, Fax: +86-755-23116366

Email: info-JYTee@lets.com, Website: <http://jyt.lets.com>

4 Technical Requirements Specification

4.1 Limits

The criteria listed in the following table shall be used to evaluate the environment impact of human exposure to radio frequency (RF) radiation as specified in 1.1307(b)

Frequency range (MHz)	Electric field strength (V/m)	Magnetic field strength (A/m)	Power density (mW/cm ²)	Averaging time (minutes)
(A) Limits for Occupational/Controlled Exposures				
0.3–3.0	614	1.63	*(100)	6
3.0–30	1842/f	4.89/f	*(900/f ²)	6
30–300	61.4	0.163	1.0	6
300–1500			f/300	6
1500–100,000			5	6
(B) Limits for General Population/Uncontrolled Exposure				
0.3–1.34	614	1.63	*(100)	30
1.34–30	824/f	2.19/f	*(180/f ²)	30
30–300	27.5	0.073	0.2	30
300–1500			f/1500	30
1500–100,000			1.0	30

4.2 Test Procedure

Equation from page 18 of OET Bulletin 65, Edition 97-01

$$S = \frac{P \times G}{4 \times \pi \times R^2}$$

Where:

S = power density

P = power input to the antenna

G = numeric gain of the antenna in the direction of interest relative to an isotropic radiator

R = distance to the centre of radiation of the antenna

4.3 Result

Frequency (MHz)	Maximum Output power (dBm)	Maximum Output power (mW)	Antenna Gain (dBi)	Antenna Gain (numeric)	Distance (cm)	Result (mW/cm ²)	Limits for General Population/ Uncontrolled Exposure (mW/cm ²)
Lora							
125K	18.73	74.645	2	1.58	20.00	0.024	0.60
500K	18.09	64.417	2	1.58	20.00	0.020	0.60

Note: Just the worst case mode was shown in report.

4.4 Conclusion

The device is exempt from the SAR test and satisfies RF exposure evaluation.

-----End of report-----