

EN IEC 62311:2020

EN 50665:2017

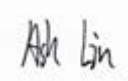
## ASSESSMENT REPORT

For

### XIAMEN HYSEN CONTROL TECHNOLOGY CO., LTD

No.888 Yuan long Industrial Park,Haicang District,Xiamen,Fujian,China

**Tested Model: HY531WE WIFI**

<b>Report Type:</b> Original Report	<b>Product Name:</b> THERMOSTAT
<b>Report Number:</b>	2507A04674E-RF-02
<b>Report Date:</b>	2026-01-09
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<b>Approved By:</b>	Miles Chen
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## REVISION HISTORY

Number of Revisions	Report No.	Version	Issue Date	Description
0	2507A04674E-RF-02	R1V1	2026-01-09	Initial Release

**GENERAL INFORMATION****Product Description for Equipment under Test (EUT)**

Applicant:	XIAMEN HYSEN CONTROL TECHNOLOGY CO., LTD
Applicant Address:	No.888 Yuan long Industrial Park,Haicang District,Xiamen,Fujian,China
Manufacturer:	XIAMEN HYSEN CONTROL TECHNOLOGY CO., LTD
Manufacturer Address:	No.888 Yuan long Industrial Park,Haicang District,Xiamen,Fujian,China
Product Name:	THERMOSTAT
Tested Model:	HY531WE WIFI
Multiple Model(s):	HY531, HY531WW WIFI, HY531LD WIFI, HY531AC WIFI, HY531WE, HY531WW, HY531LD, HY531AC, HY131, HY131WE WIFI, HY131WW WIFI, HY131LD WIFI, HY131AC WIFI, HY131WE, HY131WW, HY131LD, HY131AC
Power Supply:	AC 90-240V, 50/60Hz
RF Function:	2.4G Wi-Fi
Maximum EIRP:	18.2dBm
Operating Band/Frequency:	2412-2472 MHz(802.11b/g/n-HT20)
Channel Number:	13
Channel Separation:	5 MHz
Modulation Type:	DSSS, OFDM
★Maximum Antenna Gain:	2.5 dBi
EUT Received Status	Good

*Note:*

*1. The maximum antenna gain is provided by the applicant.*

*2. The test model is identify with the series model except for the model name and appearance, the details are as follows:*

Tested Model(s)	Series Models	Differences Items	Details
HY531WE WIFI	HY531, HY531WW WIFI, HY531LD WIFI, HY531AC WIFI, HY531WE, HY531WW, HY531LD, HY531AC	Model Name	All are the same except model name. ( Each model comes in two colors: black and white.)
	HY131WE WIFI, HY131, HY131WW WIFI, HY131LD WIFI, HY131AC WIFI, HY131WE, HY131WW, HY131LD, HY131AC	Model Name, and appearance	All are the same except model name and appearance (The appearance widths of the products vary ). Each models is available in black and white.

*Based on the description above, the appearance differences do not affect the test results. Therefore, model HY531WE WIFI has been selected for testing.*

*3. The EUT was received on 2025-12-17.*

## Objective

This report is prepared for *XIAMEN HYSEN CONTROL TECHNOLOGY CO., LTD* in accordance with EN 50665:2017, Generic standard for assessment of electronic and electrical equipment related to human exposure restrictions for electromagnetic fields (0 Hz - 300 GHz) and EN IEC 62311:2020, Generic standard to demonstrate the compliance of electronic and electrical apparatus with the basic restrictions related to human exposure to electromagnetic fields (0 Hz–300 GHz) is to demonstrate the compliance of apparatus with the basic restrictions or reference levels on exposure of the general public related to electric, magnetic, electromagnetic fields as well as induced and contact current

The objective is to determine the compliance of EUT with EN IEC 62311:2020, EN 50665:2017.

## Test Methodology

All measurements contained in this report were conducted with EN IEC 62311:2020, EN 50665:2017.

## Test Facility

The Test site used by Bay Area Compliance Laboratories Corp. (Fujian) to collect test data is located on the Unit 302, No. 902, Meifeng South Road, Tong'an District, Xiamen City.

## Technical Requirements Specification in EN IEC 62311:2020

### General Description of Applied Standards

EN IEC 62311 Generic standard to demonstrate the compliance of electronic and electrical apparatus with the basic restrictions related to human exposure to electromagnetic fields (0 Hz–300 GHz) is to demonstrate the compliance of apparatus with the basic restrictions or reference levels on exposure of the general public related to electric, magnetic, electromagnetic fields as well as induced and contact current.

## RF Exposure Measurement

### Limit:

According to EN 50665:2017, the criteria listed in the below table shall be used to evaluate the environmental impact of human exposure to radio-frequency (RF) radiation as specified table 2 of Council Recommendation 1999/519/EC.

Reference levels for electric, magnetic and electromagnetic fields  
(0 Hz to 300 GHz, unperturbed rms values)

Frequency range	E-field strength (V/m)	H-field strength (A/m)	B-field(μT)	Equivalent plane wave power density $S_{eq}(W/m^2)$
0-1 Hz	-	$3,2 \times 10^4$	$4 \times 10^4$	-
1-8 Hz	10 000	$3,2 \times 10^4/f^2$	$4 \times 10^4/f^2$	-
8-25 Hz	10 000	$4\,000/f$	$5\,000/f$	-
0,025-0,8 kHz	$250/f$	$4/f$	$5/f$	-
0,8-3 kHz	$250/f$	5	6,25	-
3-150 kHz	87	5	6,25	-
0,15-1 MHz	87	$0,73/f$	$0,92/f$	-
1-10 MHz	$87/f^{1/2}$	$0,73/f$	$0,92/f$	-
10-400 MHz	28	0,073	0,092	2
400-2 000 MHz	$1,375 f^{1/2}$	$0,0037 f^{1/2}$	$0,0046 f^{1/2}$	$f/200$
2-300 GHz	61	0,16	0,20	10

Notes:

1. f as indicated in the frequency range column.

## Test method

### Far Field

The antenna of the product, under normal use condition is at least 20cm away from the body of the user. So, this product under normal use is located on electromagnetic far field between the human body.

#### Far Field Calculation Formula

$$E = \frac{\sqrt{30PG(\theta, \phi)}}{r}$$

Where:

P= Tune-up average conducted power

G= antenna gain relative to an isotropic antenna

$\theta, \phi$  = elevation and azimuth angles to point of investigation

r= distance from observation point to the antenna

### Equivalent plane wave power density:

#### Equivalent plane wave power density Seq Calculation Formula

$$\text{Power density Seq} = PG/(4\pi r^2)$$

Where:

P= Tune-up average conducted power

G= antenna gain relative to an isotropic antenna

r= distance from observation point to the antenna

For simultaneously transmit system, the calculated power density should comply with:

$$\sum_i \frac{S_i}{S_{Limit,i}} \leq 1$$

**Test Data**

Mode	Frequency	★Tune-up average power (EIRP)		Power Density Seq	Seq Limit	Result
	MHz	(dBm)	(W)	(W/m <sup>2</sup> )	(W/m <sup>2</sup> )	
2.4G Wi-Fi	2412-2472	18.5	0.071	0.141	10	Pass

**Note:**

1. Antenna Gain (numeric): 2.5dBi (1.78) for 2.4G Wi-Fi
2. The distance from observation point to the antenna is 20cm.

**Conclusion: The RF Exposure is compliance**

## **EXHIBIT A - EUT PHOTOGRAPHS**

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Please refer to report No.: 2507A04674E-EM-02



## Declarations

1. Bay Area Compliance Laboratories Corp. (Fujian) is not responsible for authenticity of any information provided by the applicant. Information from the applicant that may affect test results are marked with an asterisk “★”.
2. Unless otherwise stated, the results shown in this test report refer only to the sample(s) tested.
3. Unless required by the rule provided by the applicant or product regulations, then decision rule in this report did not consider the uncertainty.
4. The extended uncertainty given in this report is obtained by combining the standard uncertainty times the coverage factor  $k=2$  with the 95% confidence interval.
5. This report cannot be reproduced except in full, without prior written approval of Bay Area Compliance Laboratories Corp. (Fujian).
6. This report is valid only with a valid digital signature. The digital signature may be available only under the adobe software above version 7.0.

**PRODUCT SIMILARITY DECLARATION LETTER**

XIAMEN HYSEN CONTROL TECHNOLOGY CO., LTD  
No.888 Yuan long Industrial Park, HaicangDistrict, Xiamen, Fujian, China

**Declaration of Model Difference**

To Whom It May Concern,

We XIAMEN HYSEN CONTROL TECHNOLOGY CO., LTD hereby declare that there are some differences between series models and tested model(s). Details are as below:

Products Description	Name:	THERMOSTAT	
	Brand:	N/A	
	Manufacturer:	XIAMEN HYSEN CONTROL TECHNOLOGY CO., LTD	
	Project No.:	2507A04674E-EM、2507A04674E-RF	
Differences Description			
Tested Model(s)	Series Models	Differences Items	Details
HY531WE WIFI	HY531, HY531WW WIFI, HY531LD WIFI, HY531AC WIFI, HY531WE, HY531WW, HY531LD, HY531AC	Model Name	All are the same except model name. ( Each model comes in two colors: black and white.)
	HY131WE WIFI, HY131, HY131WW WIFI, HY131LD WIFI, HY131AC WIFI, HY131WE, HY131WW, HY131LD, HY131AC	Model Name and appearance	All are the same except model name and appearance (The appearance widths of the products vary ). Each models is available in black and white.

Note: Tested Model(s) mean the models have been tested by Bay Area Compliance Laboratories Corp.( Fujian).

Except for the differences in above table, we declare the products are identical in every other way. We guarantee all the information provided above is true, and notice that we'll bear all the consequences caused by any false information or concealing.

Best Regards,

Signature:

Deng:

Print Name: Deng

Title: Manager

\*\*\*\*\*END OF REPORT\*\*\*\*\*