

TEST REPORT

Product: 嵌入机

Model: AB71S2SG1FA

Test Type: Entrustment test

Client: 青岛海尔空调电子有限公司

青岛海尔空调电子有限公司检测中心

Declaration

- 1 This report is invalid without the dedicated inspection seal or official seal of the testing institute.**
- 2 This report shall not be reproduced without written approval(except complete reproducing). Reproducing report shall be invalid without the dedicated inspection seal or official seal of the testing institute.**
- 3 The report is invalid without the signatures of the chief testing person, reviewer, approver.**
- 4 Any modification without permission to the report will make the report invalid.**
- 5 Any objections on the report should be formally submitted to Qingdao Profound Testing Technology Service Co., Ltd. within no more than 15 days since the report is delivered. After that date, nothing objections will be accepted.**
- 6 if no objections, the samples should be taken back within 15 days since the report is delivered. After that date, samples will be disposed by 青岛海尔空调电子有限公司检测中心**
- 7 All the conclusions presented in this report are based on the samples provided by the client.**

Address: 山东省青岛市经济技术开发区前湾港路236号海尔工业园内B座

Tel: 0532-88932402

Post code: 266555

TEST REPORT

Report No: HR201806140141A31035

Page 1 of 19

Appliance:	嵌入式	Sample Level:	Primary Sample	
Brand:	Haier	Sample Size:	1	
Model:	AB71S2SG1FA	Sample Code:		
Client:	青岛海尔空调电子有限公司	Client Address:	青岛海尔信息产业园A10座	
Test Type:	Entrustment test	Test Purpose:	New Product Certification Test	
Manufacture:	黄岛商用空调	Sample Received:	2018-06-14	
Test Condition:	20°C 40%RH	Test Commenced:	2018-06-16	
Test Standard:	EN 14511-1:2013/ EN 14511-2:2013/EN 14511-3:2013/ EN 14511-4:2013	Test Completed:	2018-06-20	
Test Items:	额定制冷C、制冷季节能源效率SEER、额定制冷D、额定制热C、制热季节能源效率SCOP、凝结水排除及凝露、额定制热B、额定制热E、最大运行制冷、额定制热A、冻结、额定制冷A、额定制冷B、除霜、额定制热量, 输入功率, COP、额定制冷量, 输入功率, EER、额定制热D			
Main Testing Equipment:	Equipment No	Name	Model	Expiration
	91MC15476	功率表	WT230	2022-05-13
Test Conclusion:	Entrusted by 青岛海尔空调电子有限公司, According to EN 14511-1:2013/ EN 14511-2:2013/EN 14511-3:2013/ EN 14511-4:2013, Carrying out tests on AB71S2SG1FA, model: 嵌入式, Total test items 17, tested 17, untested 0, unapplicable 0, 17 items Passed, 0 items Failed, 0 items Not Judged. Test Conclusion: Pass (Blank) (Dedicated Inspection Seal)			
Client Remarks				
Test Lab Notes: Sample No: S20190314200011				
Previous Test Information:				
Number of Tests	Test Date	Report No	Test Conclusion	Unfold v

Tested by: 武玉

Reviewed by: 纪新妮

Approved by: 王

鸣Date: 2018-06-20

Date: 2018-06-22

涛Date: 2018-06-23

TEST REPORT

Report No: HR201806140141A31035

Page 2 of 19

Sample Details (Nameplate Content)					
No	Items	Parameter	No	Items	Parameter
1	额定制冷量	7100W	2	额定制冷输入功率/电流	2200/9.56W/A
3	额定最大制冷输入功率/电流	3000/13W/A	4	额定制热量	8000W
5	额定制热输入功率/电流	2150/9.37W/A	6	额定最大制热输入功率/电流	3000/13W/A
7	SEER/SCOP	6.1/3.8W/W	8	电源	1PH 220V-240V 50/60HZV/Hz
9	循环风量	1260m³/h	10	Refrigerant	R32
11	Maximum working pressure on cold side	4.3MPa	12	Category of electric shock protection	I
13	Noise	55dB (A)	14	灌注量	1.3kg
15	Maximum operating pressure on the hot side	4.3MPa	16	电加热消耗功率	0W
17	EER/COP	3.23/3.71W/W			

Sample Key Parts Description				
No	Key Parts Name	Specification	Dedicated Code	Supplier
1	遥控器	-	015001554	创新科技
2	Compressor	/	0010722555A	Mitsubishi Electric (Guangzhou) Compressor Co., Ltd.
3	内机风机	/	0150401754	Zhongshan Broad Ocean Motor Co.ltd.
4	程序校验合	/	-	-
5	E2校验合	/	-	-
6	电控箱体	/	0150836746	/
7	外风机	/	0010401832	Nidec Shibaura (Zhejiang) Co., Ltd.
8	外机电脑板	-	0011800930E	Qingdao Haier Intelligent Electronics Co., Ltd.
9	Computer board of indoor motor	-	0151800208CF	-

Sample Modification Description							
Modification Type: Modification Type: a) Parts Replacement, b) Parameter Adjusting, c) Sample Replacement, d) Combination above							
No	Type	Name (Parts)	Before Modified (Parameter)	Modified (Parameter)	Modified by	Date	Attachment
无							

Sample Appearance Description (Package,Appearance,etc.)			
无			
Deviation Description:			
No	Items	Standard Requirements	Actual Testing
无			

Attachments (click to download)

TEST REPORT

Report No: HR201806140141A31035

Page 3 of 19

Test Item: 额定制冷D

Standard Requirements: D工况下进行额定制冷测试, 制冷量、EER数据参与SEER计算, 不做判定

Sample No: S20190314200011

外机1U71S2SR2FA与内机AB71S2SG1FA型号匹配;
机器定频12Hz 实测制冷量为1845W, 消耗功率为147W

Test Conclusion: Pass

TEST REPORT

Report No: HR201806140141A31035

Page 4 of 19

Test Item: 额定制热D

Standard Requirements: D工况下进行制热量测试, 工况稳定后空调连续运行3小时, 测试所得的制热量、功率、COP数据参与SCOP计算, 不做判定.

Sample No: S20190314200011

机器定频15Hz 实测能力为1455W, 消耗功率为255W

Test Conclusion: Pass

TEST REPORT

Report No: HR201806140141A31035

Test Item: 额定制冷A

Standard Requirements: 额定制冷 (制冷A工况制冷量) SCOP判定要求均为 $\geq 92\%$ 标称值 额定制冷量=制冷A工况制冷量, 要求制冷A工况制冷量不小于额定制冷量的92% SEER、SCOP判定要求均为 $\geq 92\%$ 标称值

Sample No: S20190314200011

实测制冷量为7168W, 为额定值的101.0% 机器定频69Hz

Test Conclusion: Pass

TEST REPORT

Report No: HR201806140141A31035

Page 6 of 19

Test Item: 额定制热C

Standard Requirements: C工况下进行制热量测试, 工况稳定后连续运行3小时, 测试所得的制热量、功率、COP数据参与SCOP计算, 不做判定.

Sample No: S20190314200011

实测 制热量为1945W, 实测消耗功率为332W 机器定频22Hz

Test Conclusion: Pass

TEST REPORT

Report No: HR201806140141A31035

Test Item: 制冷季节能源效率SEER

Standard Requirements: 通过额定制冷A、B、C、D四个工况测试制冷量、功率、EER数据, 计算得出的SEER、不应小于标称值的92%。

Sample No: S20190314200011

实测SEER为 $6.15 \text{ W} \cdot \text{h} / \text{W} \cdot \text{h}$,为额定值的100.8% 实测待机功率2.5W 送风功率30.0W

Test Conclusion: Pass

TEST REPORT

Report No: HR201806140141A31035

Page 8 of 19

Test Item: 额定制热B

Standard Requirements: B工况下进行制热量测试, 至少运行一个及以上的完整除霜周期, 测试所得的制热量、功率、COP数据参与SCOP计算, 不做判定.

Sample No: S20190314200011

实测制热量为2684W, 实测消耗功率为702W 机器定频40Hz

Test Conclusion: Pass

TEST REPORT

Report No: HR201806140141A31035

Page 9 of 19

Test Item: 额定制热A

Standard Requirements : 额定制热量 (制热 A 工况制热量 ± 0.88) 额定制热量 = 制热 A 工况制热量 ± 0.88 , 计算出的制热量不小于额定制热量的92% SEER、SCOP判定要求均为 $\geq 92\%$ 标称值

Sample No: S20190314200011

实测制热量为4425W, 实测消耗功率为1454W 机器定频75Hz

Test Conclusion: Pass

TEST REPORT

Report No: HR201806140141A31035

Test Item: 额定制冷B

Standard Requirements: B工况下进行额定制冷测试, 制冷量、EER数据参与SEER计算, 不做判定

Sample No: S20190314200011

实测制冷量为5220W, 实测消耗功率为989W 机器定频39Hz

Test Conclusion: Pass

TEST REPORT

Report No: HR201806140141A31035

Page 11 of 19

Test Item: 制热季节能源效率SCOP

Standard Requirements : 通过额定制热 A、B、C、D、E 五个工况, 测试制热量、功率、COP 数据, 计算得出的SCOP不应小于标称值的92%。

Sample No: S20190314200011

实测SCOP为3.91 W·h/W·h, 为额定值的102.9% 待机功率2.5W

Test Conclusion: Pass

TEST REPORT

Report No: HR201806140141A31035

Page 12 of 19

Test Item: 额定制冷C

Standard Requirements: C工况下进行额定制冷测试, 制冷量、EER数据参与SEER计算, 不做判定

Sample No: S20190314200011

实测制冷量为3425W, 实测消耗功率为458W 机器定频21

Test Conclusion: Pass

--

TEST REPORT

Report No: HR201806140141A31035

Page 13 of 19

Test Item: 额定制热E

Standard Requirements: E工况下进行制热量测试, 工况稳定后,至少运行一个或以上的完整除霜周期, 测试所得的制热量、功率、COP数据参与SCOP计算, 不做判定.

Sample No: S20190314200011

实测制热量为4959W, 实测消耗功率为1977W 机器定频85Hz

Test Conclusion: Pass

TEST REPORT

Report No: HR201806140141A31035

Test Item: 额定制热量, 输入功率, COP

Standard Requirements:

实测制热量 \geq 标称值的92%, 实测输入功率 \leq 标称值的110%, COP \geq 标称值的90%

Sample No: S20190314200011

机器定频75Hz 实测制热量为8022W, 为额定值的100.3%; 实测输入功率为2139W, 为额定值的99.2%; 实测COP为3.75W/W,为额定值的101.1%

Test Conclusion: Pass

TEST REPORT

Report No: HR201806140141A31035

Test Item: 额定制冷量, 输入功率, EER

Standard Requirements:

实测制冷量 \geq 标称值的92%, 实测输入功率 \leq 标称值的110%, EER \geq 标称值的90%

Sample No: S20190314200011

机器定频64Hz 实测制冷量为7192W, 为额定值的101.4%; 实测输入功率为2171W, 为额定值的98.8%; 实测EER为3.32W/W,为额定值的103.1%

Test Conclusion: Pass

TEST REPORT

Report No: HR201806140141A31035

Test Item: 最大运行制冷

Standard Requirements:

- 1.关机前1小时内, 机组电机应能持续运行, 且其电机过载保护装置不会动作
- 2.关机5分钟之后, 机组应在压缩机重新启动之后的5分钟内自动重启
- 3.重启后, 机组电机过载保护装置不应动作且电机连续运行1小时

Sample No: S20190314200011

分别在230V、198V、264V电压下测试:
最初的1h运行期间过载保护未出现动作,
停机后再启动连续运行2h无异常现象。

高温制冷 (内32.00/-℃ 外: 58℃) 保护装置未动作。

制冷启动 (内: 32.00/23.00℃, 外: 43.00/26.00℃) 工况稳定后分别在额定电压, 额定电压的110%, 额定电压的90%, 进行启停实验, 每个电压运行1小时。每小时启停6次, 均正常启动无异常现象。

.电压波动. 室内 (32.00/23.00) 室外 (43.00/26.00)

电压波动 (内: 32.00/23.00℃, 外: 43.00/26.00℃) 工况运行稳定后, 每间隔12分钟 (±15%) 急剧波动一次的频率连续做5次, 波动结束后, 恢复到额定电压运行30min, 无异常现象

最小制冷国标工况 (内: 21.00/15.00℃, 外: 10.00/6.00℃)

最小制冷说明书最低温度 (内: 18.00/14.00℃, 外: -10.00/—℃)

说明书最低温度低速运行12小时, 国标工况低速运行4小时:

实验中安全装置未跳开,

过载保护未动作,

蒸发器迎风面未结霜。

Test Conclusion: Pass

TEST REPORT

Report No: HR201806140141A31035

Test Item: 冻结

Standard Requirements:

- 1.蒸发器上不应残留有余霜或冰块
- 2.不应有冰霜掉落在机组之外
- 3.不应有水低落或吹出到房间内

Sample No: S20190314200011

冻结.室内 (21.00/15.00) 室外 (21.00/15.00)

保护器装置无动作, 室内无水滴滴落, 室内蒸发器结霜少于50%

Test Conclusion: Pass

TEST REPORT

Report No: HR201806140141A31035

Test Item: 凝结水排除及凝露

Standard Requirements:

测试期间除排水管之外, 应无凝结水滴落、流出或吹出。

室内机排水口直径应 ≥ 12 mm。

Sample No: S20190314200011

凝结水未检测

凝露1 (27/25°C 外:27/25°C) 凝露2 (27/25°C 外:27/25°C) 凝露3 (21/19°C 外:-10/-°C)分别测试

凝露1工况稳定后空调器除湿低风运行5h, ; 对压缩机启停开10min, 停6min无水滴滴下或吹出现象。

凝露2工况稳定后空调器冷低风连续运行5h, 无水滴滴下或吹出现象;

凝露3工况稳定后空调器低风运行2h, 后转高风运行3h无水滴滴下或吹出现象;

Test Conclusion: Pass

TEST REPORT

Report No: HR201806140141A31035

Test Item: 除霜

Standard Requirements:

接水盘及其周边不应有结冰增多的趋势

Sample No: S20190314200011

除霜

1. 除霜结束后无残留余霜。
2. 除霜时间为实验总时间的11.1%。
3. 除霜时出风温度未低于18℃。
4. 除霜结束后室外侧气温上升: 0.24℃

倍除霜

先进行1h自动除霜, 然后拔掉温度传感器, 运行两个除霜周期, 将除霜传感器恢复, 机器可以正常启动, 再进行12h自动除霜, 空调除霜结束后室外换热器霜层可以化掉。

最大制热

分别在230V、198V、264V电压下测试:

最初的1h运行期间过载保护未出现动作, 停机后再启动连续运行2h无异常现象。

低温制热. 室内 (20.00/12.00) 室外 (-11.00/-12.00)

高风运转8小时, 在除霜结束后, 无残留余霜, 运行过程中无压缩机保护现象。

超低温制热. 室内 (20.00/12.00) 室外 (-15.00/-)

上电静置8h后开机运行4h, 机器正常运行, 各部件无损坏; 空调器除霜结束后, 室外换热器的霜层可以化掉, 无余霜, 除霜结束及压机换向启动初, 室内机无冷风吹出

大湿度除霜. 室内 (20.00/12.00) 室外 (-5.00/-6.00)

除霜前吹出温度未低于30℃,

除霜时间为一个除霜周期的15.6%

无保护动作, 无杂音

Test Conclusion: Pass