

RG70E/BGEFU1

Wireless Remote Controller

SERVICE MANUAL

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INTRODUCTION

This service manual provides the necessary information to use the service functions on the RG70E/BGEFU1 wireless remote controller. Use the Table of Contents to locate a desired topic.



Fig. 1 – Remote Controller

HANDLING THE REMOTE CONTROLLER

Remote Controller Location

Keep the remote controller within a distance where its signals can reach the indoor unit's receiver (not to exceed 26 ft. (8m)).

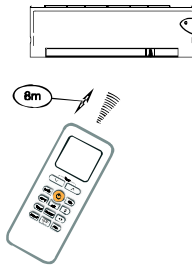


Fig. 2 – Remote Controller Location

⚠ CAUTION

- The air conditioner will not operate if curtains, doors or other materials block the signals from the remote controller to the indoor unit.
- Prevent any liquid from falling on or into the remote controller. Do not expose the remote controller to direct sunlight or heat.
- If the infrared signal receiver on the indoor unit is exposed to direct sunlight, the air conditioner may not function as designed. Use curtains to prevent sunlight from shining directly on the air conditioner.
- If other electrical appliances respond to the remote controller, either move the appliances or consult your local dealer.

Replacing Batteries

The remote controller uses two alkaline dry batteries (AAA).

1. Slide the battery compartment cover off, according to the arrow direction, then replace the old batteries with new batteries.
2. Insert the new batteries. Ensure the batteries are installed correctly, based on their (+) and (-) polarities.
3. Slide the battery compartment cover back into position.

NOTE:

- Do not mix old and new batteries or batteries of different types.
- Do not leave the batteries in the remote controller if the remote is not going to be used for 2 or 3 months.
- Dispose old batteries in the appropriate recycle bins.

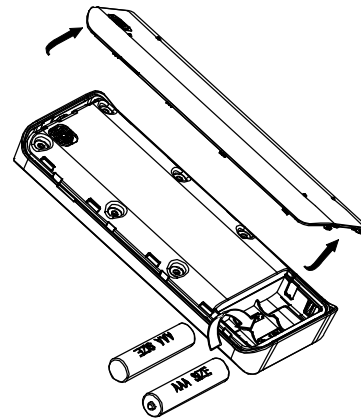


Fig. 3 – Remove the back cover



Remote Controller Specification



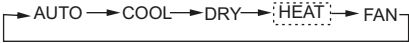
Table 1—Remote Controller Specification

Model	RG70D/BGEFU1
Rated Voltage	3.0V (Dry batteries AAA)
Signal Receiving Range	26 ft. (8m)
Environment	23°F (-5°C) ~ 140°F (60°C)

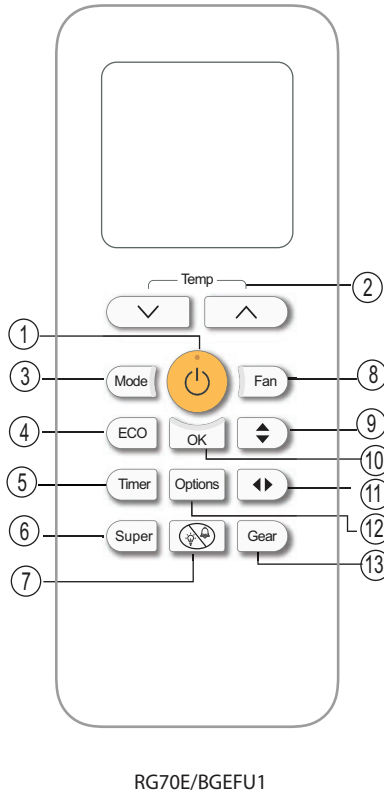
FUNCTION BUTTONS


Before you use your new system, familiarize yourself with the remote controller. The following is a brief introduction of the remote controller.

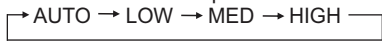
- ① ON/OFF Button ()
This button turns the air conditioner ON and OFF.
- ② Temp Up Button ()
Press this button to increase the set temperature or Timer setting hours.

Temp Down Button ()
Push this button to decrease the set temperature or Timer setting hours.
NOTE:
 - When the air conditioner operates under heating mode with the set temperature of 62°F(17°C), pressing  button continuously for two times will activate 46°F(8°C) heating. The indoor unit display shows "FP".
 - Press and hold UP and DOWN buttons together for 3 seconds to alternate the temperature display between the °C & °F scale.
- ③ Mode Button
Press this button to modify the air conditioner mode in a sequence:


NOTE: Please do not select HEAT mode if the unit you purchased is the COOLING ONLY type. Heat mode is not supported by the COOLING ONLY unit.
- ④ ECO Button
Use to enter the energy efficient mode. Under COOLING mode, press this button, the remote controller will adjust the temperature automatically to 75°F(24°C), AUTO fan speed to save energy (however only if the set temperature is less than 75°F(24°C). If the set temperature is between 75°F(24°C) and 86°F(30°C), press the ECO button, the fan speed will change to AUTO, the set temperature will remain unchanged.



- NOTE:
- Pressing the ECO button, or modifying the mode or adjusting the set temperature to less than 75°F(24°C) stops the ECO operation.
 - Under ECO operation, the set temperature should be 75°F(24°C) or more. It may result in insufficient cooling. If you feel uncomfortable, press the ECO button again to stop it.
- ⑤ Timer Button
Press this button to initiate the auto-on/ auto-off time sequence.
 - ⑥ Super Button
 - Press this button under the cooling operation, the set temperature will change to 62°F(17°C), the fan speed shifts to high and starts a faster cooling operation.
 - Press this button under the heating operation, the set temperature will change to 86°F(30°C), the fan speed shifts to high and starts a faster heating operation.
- NOTE:
- This function is not available under AUTO, DRY, FAN, Self Clean or Comfort mode.
 - Press MODE, FAN, or ECO button to cancel the Super function.
- ⑦ Do Not Disturb Button 

Press this button to turn off the indoor screen display, and also turn off the air conditioner buzzer, the fan speed shifts to low, which creates a comfortable and quiet environment. Press it again to cancel this function. Under the Do Not Disturb mode, the display illuminates for 10 seconds while adjusting the mode, set temperature or fan speed, etc.
 - ⑧ Fan Button
Use to select the fan speed:


NOTE:
 - You can not switch the fan speed in AUTO or DRY mode.
 - Hold down this button for at least 2 seconds to activate/cancel Silent mode. Due to the low frequency operation of compressor, it may result in insufficient cooling and heating capacity.
 - Press Fan, MODE, ON/OFF, ECO or Gear button to cancel the Silent function.

Fig. 4 – Remote Controller

NOTE: Remote Controller also available through RCD P/N 17317000A34063. Remote Holder P/N 12117000000318.

ACCESSING THE SERVICE FUNCTIONS

Caution: Read and understand the function changes you wish to make in advance. The remote will not read the parameters in the unit.

1. Before using the service functions of the remote, turn **OFF** the indoor unit with the remote.
2. Turn **OFF** the power to the outdoor unit for 3 (up to 5) minutes. Turn the power back **ON**.
3. Remove the batteries from the remote and wait for the remote screen to clear and press any button to clear the screen.
4. Within 30 seconds of replacing the batteries, simultaneously press **MODE** and **FAN** for five (5) seconds. You are now in the **SERVICE FUNCTION** mode and the remote displays **F1**.
5. Use **TEMP +** or **-** to find and display the parameter you want to change.
6. When the parameter you want to change appears, press **MODE** (parameters displayed after pressing **MODE** are default values only, **NOT** the values stored in the unit. The values are stored in the unit, not the controller. Pressing **MODE** only displays the default value for that setting.).
7. To change the parameter use the **TEMP +** or **-** until the value you want appears.
8. Press **FAN** to confirm the new setting value and transmit it to the Indoor Unit (the unit displays the value being set). For example (HH), when setting F6 to heating only; (CO and the number (1) appears when setting the F4 function to 1). The readout is different for each function setting change. The unit also beeps along with the readout to confirm this.
9. Repeat steps 6 thru 9 for any other parameter you are changing.
10. When finished, turn **OFF** power to the outdoor unit for 3-5 minutes to reset the system with the new changes.
11. Remove batteries from the remote and press any button to clear the screen. Replace the batteries and wait 30 seconds.
12. The remote is now restored to normal function and you may operate the system. The power needs to be cycled for 3-5 minutes.

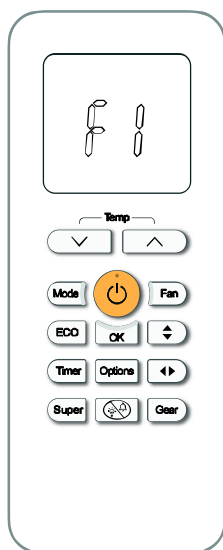


Fig. 5 – Remote Controller

IMPORTANT: The remote controller is enabled within 10 minutes after the indoor unit is powered on, and the indoor unit must be turned off.



Press this button to turn on/ off the unit

Fig. 6 – Power



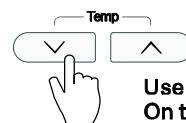
Press to check the current function parameters of the indoor unit.

Fig. 7 – Fan



Use to modify the selected function or adjust the parameter. Press to enter the parameter setting interface, and the parameter (to be modified) will keep flashing.

Fig. 8 – Mode



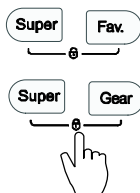
Use to choose functions or adjust parameters. On the parameter unadjustable interface, press the "∨" & "∧" button to select the specified function in a range of F1 ~ F9 and E1~E9. Then press the **MODIFY** button to enter the parameter modifying interface, the relevant parameter flashes. Press the "∨" & "∧" button to adjust the parameter.

Fig. 9 – Adjust



Press to confirm the setting parameter and transmit the signal to the unit.

Fig. 10 – Confirm



LOCK: Hold and press these two buttons for 2 seconds; all current settings of the indoor unit are locked in and the remote controller does not accept any operation except that of the lock.

Fig. 11 – Lock

REMOTE CONTROLLER FUNCTIONS

NOTE: The indoor unit beeps for 2 seconds indicating the function has been successfully set.

Auto-Start Function (F1)

In the event of a sudden power failure, the module memorizes the setting conditions before the power failure. The unit resumes the previous operation setting automatically after 3 minutes when the power returns. To enable/disable this function:

1. Press \wedge and ∇ to select "F1".

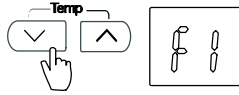


Fig. 12 – Select F1

2. Press **MODE**. Next, press \wedge and ∇ to choose **ON** or **OFF**.

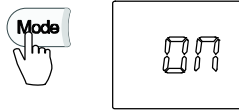


Fig. 13 – Select On or Off

3. Press **OK** to complete the Auto-start function.



Fig. 14 – OK

Heating Temperature Compensation (F2)

Defines the adjustment for the thermal stratification in the room and how the indoor unit is sensing the space. To adjust the temperature compensation, in Celsius only.

NOTE: The temperature compensation in Celsius regardless of the units used.

1. Press \wedge and ∇ to select "F2".

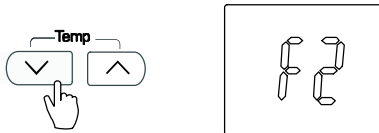


Fig. 15 – Select F2

2. Press **MODE**. Next, press \wedge and ∇ to select the parameter. The parameters can be adjusted within a range of 21.2°F~42.8°F (-6°C ~ 6°C).

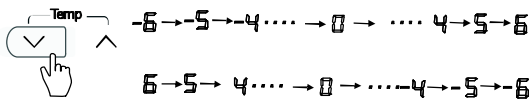
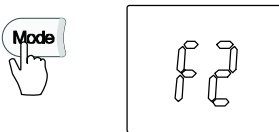


Fig. 16 – Select the parameter

3. Press **OK** to confirm.



Fig. 17 – OK

Anti-Cold Air Function (F3)

A) Intelligent Anti-Cold Air Function

NOTE: The intelligent anti-cold air parameter changes with the room temperature. Once the room temperature rises, the anti-cold air temperature rises as well, which is designed to provide the user with increased comfort. After the room temperature decreases, the anti-cold air temperature decreases as well, which is designed to improve fan speed and result in a faster heating operation.

NOTE: No setting adjustment recommended.

1. Press \wedge and ∇ to select "F3".

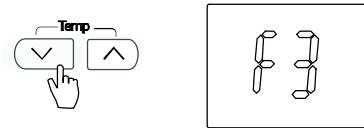


Fig. 18 – Select F3

2. Press **MODE**. Next, press \wedge and ∇ to select "1".

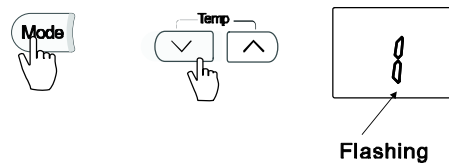


Fig. 19 – Select 1

3. Press **MODE** to adjust the parameter. The parameter continues to flash. The parameter can be adjusted in the range of 63°F (17°C) ~ 70°F(21°C).

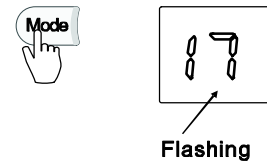


Fig. 20 – Mode

4. Press **OK** to confirm.



Fig. 21 – OK

B) General Anti-Cold Air Function Setting (Cold Blow Prevention Function)

The general anti-cold air parameter is set regardless of the room temperature.

NOTE: No setting adjustment recommended.

1. Press \wedge and \vee to select "F3".

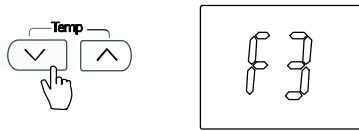


Fig. 22 – Select F3

2. Press **MODE**. Next, press \wedge and \vee to select "2".

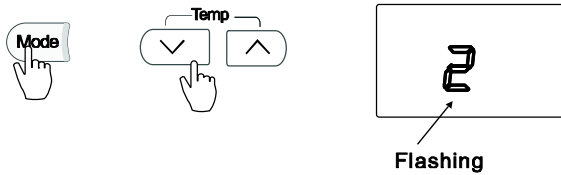


Fig. 23 – Select 2

3. Press **MODE** to adjust the parameter in the range of 46°F(8°C) ~ 82°F(28°C)).

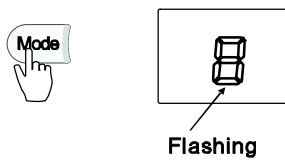


Fig. 24 – Adjust the parameter

4. Press **OK** to confirm.



Fig. 25 – OK

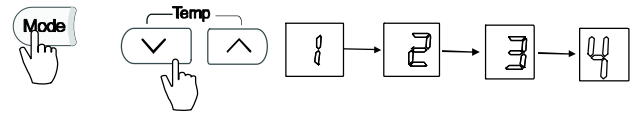
Indoor Fan Motor Speed Control after Set Temperature is Reached (F4)

1. Press \wedge and \vee to select "F4".



Fig. 26 – Select F4

2. Press **MODE**. Next, press \wedge and \vee to select "1", "2", "3", "4".



Indicates stopping fan motor



Indicates operating at lowest fan speed



Indicates operating at setting fan speed



Indicates Ternal function

Fig. 27 – Select a number

3. Press **OK** to confirm.



Fig. 28 – OK

Louver Angle Memory Function (F5)

1. Press \wedge and \vee to select “F5”.

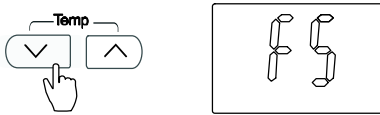
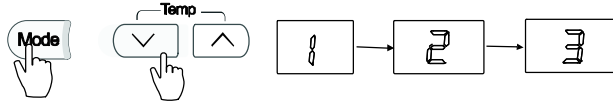


Fig. 29 – Select F5

2. Press **MODE**. Next, press $+$ and $-$ to select “1”, “2”, or “3”.



Indicates cancelling memory function.



Indicates the louver angle memory function is enabled under switching off or power failure.



Indicates the louver angle memory function is enabled under switching off, disabled under power failure.

Fig. 30 – Select a number

3. Press **OK** to confirm.



Fig. 31 – OK

Heating Only or Cooling and Heating Setting (F6)

1. Press \wedge and \vee to select “F6”.

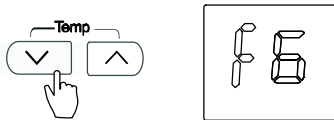


Fig. 32 – Select F6

2. Press **MODE**. Next, press \wedge and \vee to select “HH” or “CH” or “CC” (HH: Heating only – CH: Cooling and Heating – CC: Cooling Only).

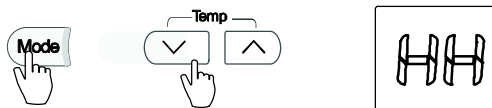


Fig. 33 – Select HH or CH or CC

3. Press **OK** to confirm.



Fig. 34 – OK

Cooling Temperature Compensation (F7)

Defines the adjustment for the thermal stratification in the room and how the indoor unit is sensing the space. To adjust the temperature compensation, in Celsius only:

NOTE: Temperature compensation in Celsius regardless of the units used.

1. Press \wedge and \vee to select “F7”.

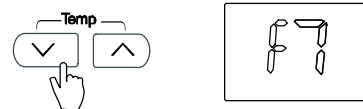


Fig. 35 – Select F7

2. Press **MODE**. Next, press \wedge and \vee to select the parameter range ($-2^{\circ}\text{C} \sim +2^{\circ}\text{C}$).
3. Press **OK** to confirm.



Fig. 36 – OK

Refrigerant Leakage Detection (F8)

1. Press \wedge and \vee to select “F8”.

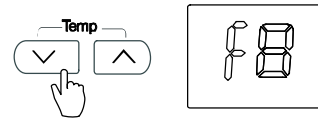


Fig. 37 – Select F8

2. Press **MODE**. Next, press \wedge and \vee to select “ON” or “OFF”.
3. Press **OK** to confirm.



Fig. 38 – OK

Cleaning Filter Reminder (F9)

1. Press \wedge and \vee to select “F9”.

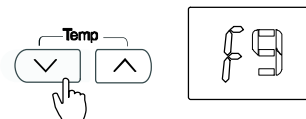


Fig. 39 – Select F9

2. Press **MODE**. Next, press \wedge and \vee to select “ON” or “OFF”.
3. Press **OK** to confirm.



Fig. 40 – OK

Filter Replacement Reminder (E1)

1. Press \wedge and \vee to select "E1".

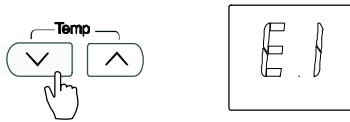


Fig. 41 – Select E1

2. Press **MODE**. Next, press \wedge and \vee to select "ON" or "OFF".
3. Press **OK** to confirm.



Fig. 42 – OK

Lowest Temperature Setting (E2)

1. Press \wedge and \vee to select "E2".

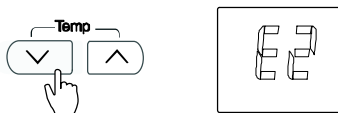


Fig. 43 – Select E2

2. Press **MODE**. Next, press \wedge and \vee to set the temperature range (63°F(17°C) to 75°F(24°C)).
3. Press **OK** to confirm.



Fig. 44 – OK

Highest Temperature Setting (E3)

1. Press \wedge and \vee to select "E3".

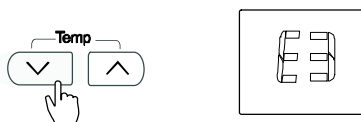


Fig. 45 – Select E3

2. Press **MODE**. Next, press \wedge and \vee to set the temperature range (77°F(25°C) to 86°F(30°C)).
3. Press **CONFIRM**.



Fig. 46 – Confirm

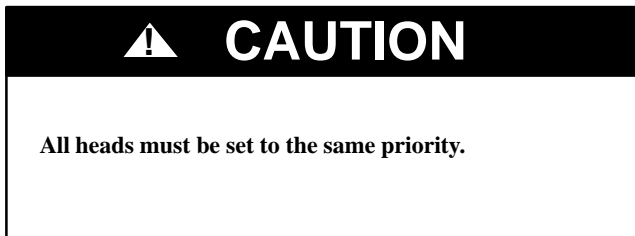
Special Function Setting (E4)

1. Press \wedge and \vee to select "E4".

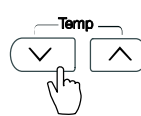


Fig. 47 – Select E4

Priority Setting of Heating or Cooling (only on Multi-Zone Systems (E5))



1. Press **+** and **-** to select "E5".



H : Heating mode first
C : cooling mode first

Fig. 48 – Select E5

2. Press **MODE**. Next, press \wedge and \vee to select "H" or "C".
3. Press **OK** to confirm.



Fig. 49 – OK

Network Address Setting (E6)

Not available, used on future applications.

Capacity Code Selection (E7)

Not available, used on future applications.

Twins Setting (E8)

Not available, used on future applications.

Static Pressure Setting (E9)

NOTE: Available only on Ducted Units.

1. Press \wedge and \vee to select "E9".

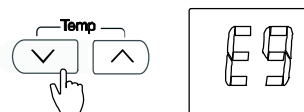


Fig. 50 – Select E9

2. Press **MODE**. Next, press \wedge and \vee to choose 0 (no twins), 1 (main unit) or 2 (subsidiary unit).
3. Press **OK** to confirm..



Fig. 51 – OK


NOTE: Depending on the model, some of the remote controller's functions may not function.

DEFAULT VALUES OF INDOOR UNITS

Table 2—Default Values of Indoor Units

Description	Remote Code	High Wall
Auto—Start Function	F1	ON
Heating Temperature Compensation	F2	2C
Anti—Cold Air Function	F3	NORMAL
Indoor Fan Motor Speed Control after Set Temperature is Reached	F4	LOWEST SPEED
Louver Angle Memory Function	F5	ON
Heating Only or Cooling and Heating Setting	F6	CH
Cooling Temperature Compensation	F7	–2C
Refrigerant Leakage Detection	F8	ON
Cleaning Filter Reminder	F9	OFF
Filter Replacement Reminder	E1	OFF
Lowest Temperature Setting	E2	17C
Highest Temperature Setting	E3	30C
Special Anti—Cold Air Function Setting	E4	N/A
Priority Setting of Heating or Cooling (Multi—Zone Systems only)	E5	H
Network Address Setting	E6	N/A
Capacity Code Selection	E7	N/A
Twins Setting	E8	N/A
Static Pressure Setting	E9	N/A

POINT CHECK FUNCTION

Press **LED** on the remote controller three times and then press **SWING**  three times within 10 seconds, the buzzer rings for 2 seconds and the air conditioner enters the information enquiry status. Next, press **LED** to search the information.


Press **SWING**  to search the remaining information. When the air conditioner enters the enquiry information status, it displays the code name in 2 seconds (see Table 3).

Table 3—Information Codes

Enquiry Information	Displaying Code	Meaning
T1	T1	Return temperature
T2	T2	Indoor Coil temperature
T3	T3	Outdoor Coil temperature
T4	T4	Outdoor Air temperature
T2B	Tb	Indoor Coil Leaving temperature
TP	TP	Compressor Discharge temperature
TH	TH	IPM Heatsink temperature
Targeted Frequency	FT	Targeted Frequency
Actual Frequency	Fr	Actual Frequency
Indoor fan speed	IF	Indoor fan speed
Outdoor fan speed	OF	Outdoor fan speed
EXV opening angle	LA	EXV opening angle
Compressor continuous running time	CT	Compressor continuous running time
Causes of compressor stop	ST	Causes of compressor stop
Reserve	A0	
Reserve	A1	
Reserve	.b0	
Reserve	.b1	
Reserve	.b2	
Reserve	.b3	
Reserve	.b4	
Reserve	.b5	
Reserve	.b6	
Reserve	.dL	
Reserve	Ac	
Reserve	Uo	
Reserve	Td	

CODE VALUE

When the air conditioner enters the enquiry information status, it displays the code value in the next 25 seconds after the display name appears (see Table 4).

Table 4—Code Value

Enquiry Information	Display Value	Meaning	Remark
T1,T2,T3, T4,T2B,TP, TH, Targeted Frequency, Actual Frequency	-1F,-1E, -1d,-1c, -1b,-1A	-25,-24,-23,-22,-21,-20	1. The displaying temperature is the actual value.
	-19-99	-19-99	2. The temperature is Celsius no matter what kind of remote controller is used.
	A0,A1...A9	100,101.....109	3. T1,T2,T3,T4,T2B display range: 77°F(-25°C)~158°F(70°C), TP display range: -20~130.
	b0,b1...b9	110,111....119	
	c0,c1....c9	120,121....129	4. Frequency display range: 0~159HZ.
	d0,d1...d9	130,131....139	5. If the actual value exceeds the range, it displays the maximum value or minimum value.
	E0,E1...E9	140,141....149	
F0,F1...F9	150,151....159		
Indoor fan speed/Outdoor fan speed	0	OFF	
	1,2,3,4	Low speed, Medium speed, High speed, Turbo	For some big capacity motors
	14-FF	Actual fan speed = Display value turns to decimal value and then multiply by 10. The unit is RPM.	For some small capacity motors, display value is from 14-FF (hexadecimal), the corresponding fan speed range is from 200-2550RPM.
EXV opening angle	0-FF	Actual EXV opening value = Display value turns to decimal value and then multiply by 2.	
Compressor continuous running time	0-FF	0-255 minutes	If the actual value exceeds the range, it displays the maximum value or minimum value.
Compressor stop causes	0-99	For a detailed meaning, please consult with an engineer	Decimal display
Reserve	0-FF		