

ORIGINAL
MANUAL

frigicoll

OWNER'S & INSTALLATION MANUAL

CONTROL BOX TYPE

CE-FCUKZ-01.1 (K01-FC-2T.1)
CE-FCUKZ-02.1 (K01-FC-4T.1)



Thank you very much for purchasing our control box type. Before using your control box type, please read this manual carefully and keep it for future reference.

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1. PRECAUTIONS

- Be sure to be in conformity with the local, national and international laws and regulations.
- Read "PRECAUTIONS" carefully before installation.
- The following precautions include important safety items. Observe them and never forget.
- Keep this manual in a handy place for future reference.

The safety precautions listed here are divided into two categories. In either case, important safety information is listed which must be read carefully.

 **WARNING**
Failure to observe a warning may result in serious injuries.

 **CAUTION**
Failure to observe a caution may result in injury or damage to the equipment.

After completing the installation, make sure that the unit operates properly during the start-up operation. Please instruct the customer on how to operate the unit and keep it maintained. Also, inform customers that they should store this installation manual for future reference.

 **WARNING**

Be sure only trained and qualified service personnel to install, repair or service the equipment. Improper installation, repair, and maintenance may result in electric shocks, short-circuit, leaks, fire or other damage to the equipment.

Install according to this installation instructions strictly. If installation is defective, it will cause water leakage, electric shock, fire.

When installing the unit in a small room, take measures against to keep refrigerant concentration from exceeding allowable safety limits in the event of refrigerant leakage. Contact the place of purchase for more information. Excessive refrigerant in a closed ambient can lead to oxygen deficiency.

Use the attached accessories parts and specified parts for installation. otherwise, it will cause the set to fall, water leakage, electric shock, fire.

Install at a strong and firm location which is able to withstand the set's weight. If the strength is not enough or installation is not properly done, the set will drop to cause injury.

Before obtaining access to terminals, all supply circuits must be disconnected.

The appliance must be positioned so that the plug is accessible.

The enclosure of the appliance shall be marked by word, or by symbols, with the direction of the fluid flow.

For electrical work, follow the local national wiring standard, regulation and this installation instructions. An independent circuit and single outlet must be used. If electrical circuit capacity is not enough or defect in electrical work, it will cause electric shock, fire.

Use the specified cable and connect tightly and clamp the cable so that no external force will be acted on the terminal. If connection or fixing is not perfect, it will cause heat-up or fire at the connection.

Wiring routing must be properly arranged so that control board cover is fixed properly. If control board cover is not fixed perfectly, it will cause heat-up at connection point of terminal, fire or electric shock.

If the supply cord is damaged, it must be replaced by the manufacture or its service agent or similarly qualified person in order to avoid a hazard.

An all-pole disconnection switch having a contract separation of at least 3mm in a pole should be connected in fixed wiring.

When carrying out piping connection, take care not to let air substances go into refrigeration cycle. Otherwise, it will cause lower capacity, abnormal high pressure in the refrigeration cycle, explosion and injury.

Do not modify the length of the power supply cord or use of extension cord, and do not share the single outlet with other electrical appliances. Otherwise, it will cause fire or electric shock.

Carry out the specified installation work after taking into account strong winds, typhoons or earthquakes. Improper installation work may result in the equipment falling and causing accidents.

If the refrigerant leaks during installation, ventilate the area immediately. Toxic gas may be produced if the refrigerant comes into the place contacting with fire.

After completing the installation work, check that the refrigerant does not leak. Toxic gas may be produced if the refrigerant leaks into the room and comes into contact with a source of fire, such as a fan heater, stove or cooker.



CAUTION

Ground the air conditioner.

Do not connect the ground wire to gas or water pipes, lightning rod or a telephone ground wire. Incomplete grounding may result in electric shocks.

Be sure to install an earth leakage breaker.

Failure to install an earth leakage breaker may result in electric shocks.

Connect the outdoor unit wires, then connect the indoor unit wires.

You are not allowed to connect the air conditioner with the power source until wiring and piping the air conditioner is done.

While following the instructions in this installation manual, install drain piping in order to ensure proper drainage and insulate piping in order to prevent condensation.

Improper drain piping may result in water leakage and property damage.

Install the indoor and outdoor units, power supply wiring and connecting wires at least 1 meter away from televisions or radios to prevent image interference or noise.

Depending on the radio waves, 1 meter may not be sufficient enough to eliminate the noise.

The appliance is not intended for use by young children or infirm persons without supervision.

Young children should be supervised to ensure that they do not play with the appliance.

Don't install the control box in the following locations:

- There is petrolatum existing.
- There is salty air surrounding (near the coast).
- There is caustic gas (the sulfide, for example) existing in the air (near a hot spring).
- The Volt vibrates violently (in the factories).
- In buses or cabinets.
- In kitchen where it is full of oil gas.
- There is strong electromagnetic wave existing.
- There are inflammable materials or gas.
- There is acid or alkaline liquid evaporating.
- Other special conditions.

2. INSTALLATION INFORMATION

- To install properly, please read this "installation manual" at first.
- The control box must be installed by qualified persons.
- If the control box is installed on a metal part of the building, it must be electrically insulated according to the relevant standards to electrical appliances.
- When all the installation work is finished, please turn on the power only after a thorough check.
- Regret for no further announcement if there is any change of this manual caused by product improvement.







INSTALLATION ORDER

- Select the location;
- Install the indoor unit;
- Install the outdoor unit;
- Install the connecting pipe;
- Connect the drainpipe;
- Wiring;
- Test operation.

3. ATTACHED FITTINGS

Please check whether the following fittings are of full scope. If there are some spare fittings, please restore them carefully.

Table.3-1

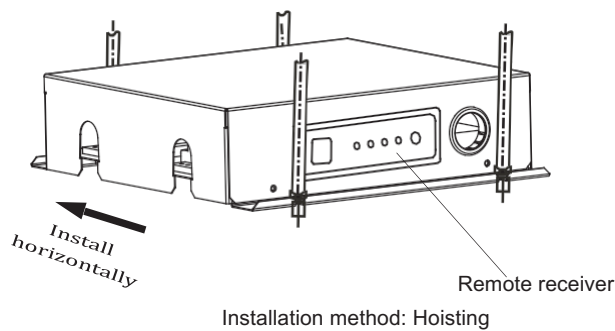
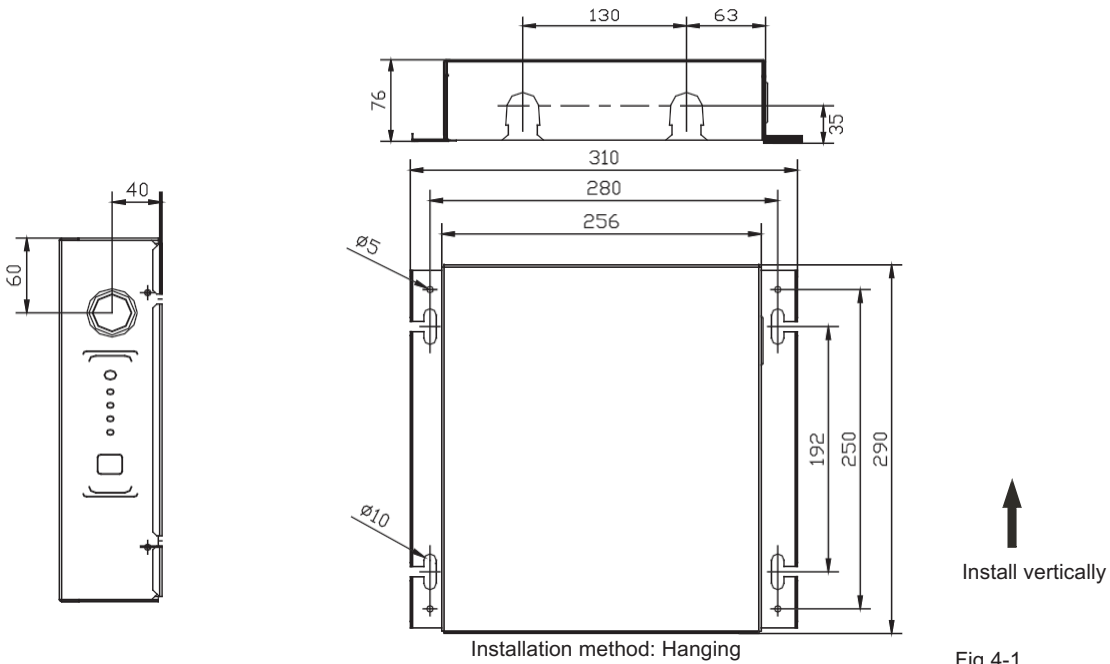
NAME	SHAPE	QUANTITY	FUNCTION
1. Screw ST3.9x25 for installation board		4	Secure the installation board
2. Temp. sensor		1	Remote temperature sensor
3. Condenser Temp.sensor		1	Battery inlet water temperature sensor (see page 7).
4. Wire controller (NOT INCLUDED)		1	Access to controls from remote control
5. Installation&owner's manual		1	Installation & owner's manual.
6. Network Interface Module Installation manual		1	

‡ CE-FCUKZ-01.1 (K01-FC-2T.1): Condenser Temp.sensor number is 1;
 CE-FCUKZ-02.1 (K01-FC-4T.1): Condenser Temp.sensor number is 2.

4. INSTALLATION METHOD & DIMENSION

Units: mm

CE-FCUKZ-01.1 (K01-FC-2T.1)
 CE-FCUKZ-02.1(K01-FC-4T.1)





NOTE

- As hanging installation please use Screw ST3.9x25 for installation.
- As hanging installation, the box should be vertical, and as hoisting installation, it should be installed horizontally, and prohibit to be sloped, inverted.
- All the pictures in this manual are for explanation purpose only. They may be slightly different from the Control Box Type you purchased (depend on model). The actual shape shall prevail.

5. ELECTRICAL WIRING



CAUTION

- The air conditioner should use separate power supply with rated voltage.
- The external power supply to the air conditioner should have ground wiring, which is linked to the ground wiring of the indoor and outdoor unit.
- The wiring work should be done by qualified persons according to circuit drawing.
- The fixed connecting lines must equip with at least 3mm electric shock spacing.
- A leakage protector should be installed according to the National Standard concerning electrical appliance.
- Be sure to locate the power wiring and the signal wirings well to avoid cross-disturbance and their contact with connecting pipe or stop valve body. Generally, do not twist two wiring together unless the joint is soldered well and covered with insulator tape.
- Do not turn on the power until you have checked carefully after wiring.

5.1 The specification of power

The specification of power as the follow display figure, if the capacity is too small will lead to overheat of the wiring, and cause burning of the machine accident.

Table.5-1

Model		CE-FCUKZ-01.1 (K01-FC-2T.1)	CE-FCUKZ-02.1 (K01-FC-4T.1)
Power	Phase	Single-phase	
	Voltage and Frequency	220-240V ~ 50Hz	



CAUTION

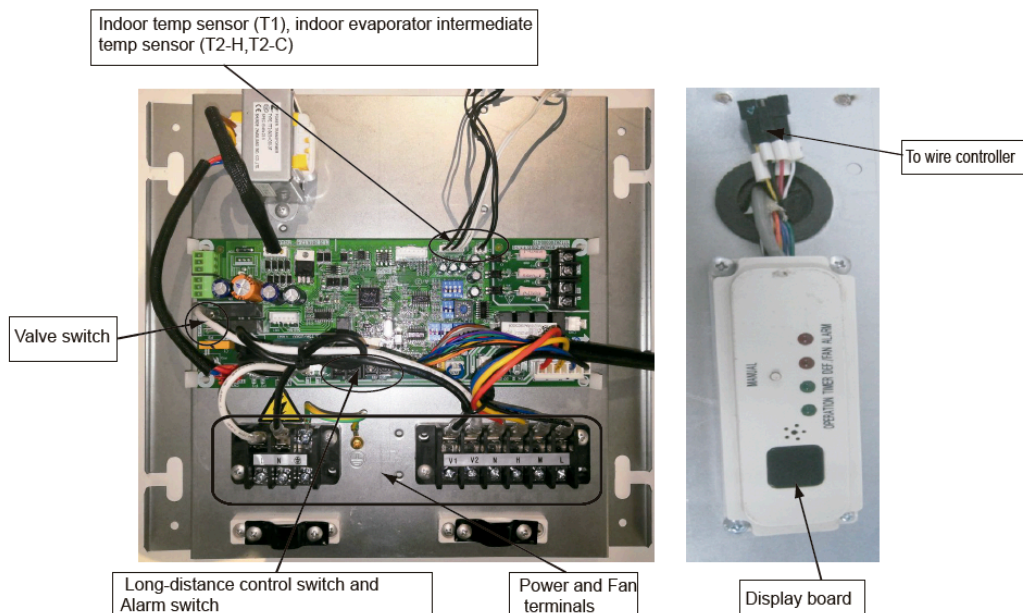
The air-gap notch in the circuit breaker is used for insulating the flexible conductor, so that must respond to the related national wire requests to connect to the fixed circuit.

5.2 Electric control box wiring figure



CAUTION

- CE-FCUKZ-01.1(K01-FC-2T.1) adopts one valve switch, CE-FCUKZ-02.1(K01-FC-4T.1) adopts two valve switches. When installing CE-FCUKZ-02.1(K01-FC-4T.1) should connect the valve switch (Valve-H and Valve-C) and temp sensor (T2-H and T2-C), and place connects respond to the wiring nameplate. T1 is indoor temperature sensor, install to the air inlet of the indoor unit.
- T2 is indoor evaporator intermediate temperature sensor, install to the intermediate of temperature evaporator.



NOTE: The picture is only for reference. please make the object as the standard.

6. APPLICATION CONTROL

6.1 Fan speed adjustment function 3 files

Available remote control to select high, medium and low three operation modes.

6.2 Long-distance control and alarm functions

- Refer wiring diagram connected CN13 port to achieve fault alarm function.
- Through regulating DIP switch SW3 and testing CN17 port status to realize long-distance control function.
 - When SW3 placed in "ON", the long-distance control function is invalid;
 - When SW3 placed in "OFF", "CN17" Disconnect, defrosting light flashes at 5Hz;

- When SW3 placed in "OFF", "CN17" closed, the system does the following response:
 - If the status is off in recent memory continues to shut down, if the boot is to reboot;
 - Start of operation mode is equivalent to power-down memory function.

6.3 Centralized control by network module

Centralized control through the network module, please refer to the attached "Network Interface Module Installation Manual" Installation

7. TROUBLE SHOOTING

7.1 Troubles and causes of remote controller

Before asking for serving or repairing, check the following points. (see in table 7-1)

Symptoms	Causes	Solution
The fan speed can not be changed.	Check whether the MODE indicated on the display is "AUTO"	When the automatic mode is selected, the air conditioner will automatically change the fan speed.
	Check whether the MODE indicated on the display is "DRY"	When dry operation is selected, the air conditioner automatically change the fan speed. The fan speed can be selected during "COOL", "FAN ONLY", and "HEAT"
The remote controller signal is not transmitted even when the ON/OFF button is pushed.	Check whether the batteries in the remote controller are exhausted.	The power supply is off.
The TEMP. indicator does not come on.	Check whether the MODE indicated on the display is FAN ONLY	The temperature cannot be set during FAN mode.
The indication on the display disappears after a lapse of time.	Check whether the timer operation has come to an end when the TIMER OFF is indicated on the display.	The air conditioner operation will stop up to the set time
The TIMER ON indicator goes off after a lapse of certain time.	Check whether the timer operation is started when the TIMER ON is indicated on the display.	Up to the set time, the air conditioner will automatically start and the appropriate indicator will go off.
No receiving tone sounds from the indoor unit even when the ON/OFF button is pressed.	Check whether the signal transmitter of the remote controller is properly directed to the infrared signal receiver of the indoor unit when the ON/OFF button is pressed.	Directly transmit the signal transmitter of the remote controller to the infrared signal receiver of the indoor unit, and then repeatedly push the ON/OFF button twice.

7.2 Malfunctions and malfunction code

If anything happens like the situation described below, please shut off the power supply of the unit and contact with the customer service center immediately.

table 7-2

NO.	Malfunction	running lamp	timer lamp	defrosting lamp	alarm lamp
1	Room temperature sensor checking channel is abnormal	×	☆	×	×
2	Evaporator sensor checking channel is abnormal	☆	×	×	×
3	EEPROM malfunction	☆	☆	×	×
4	Water-level switch malfunction	×	×	×	☆

(× Extinguish, ☆ Flash at 5Hz)

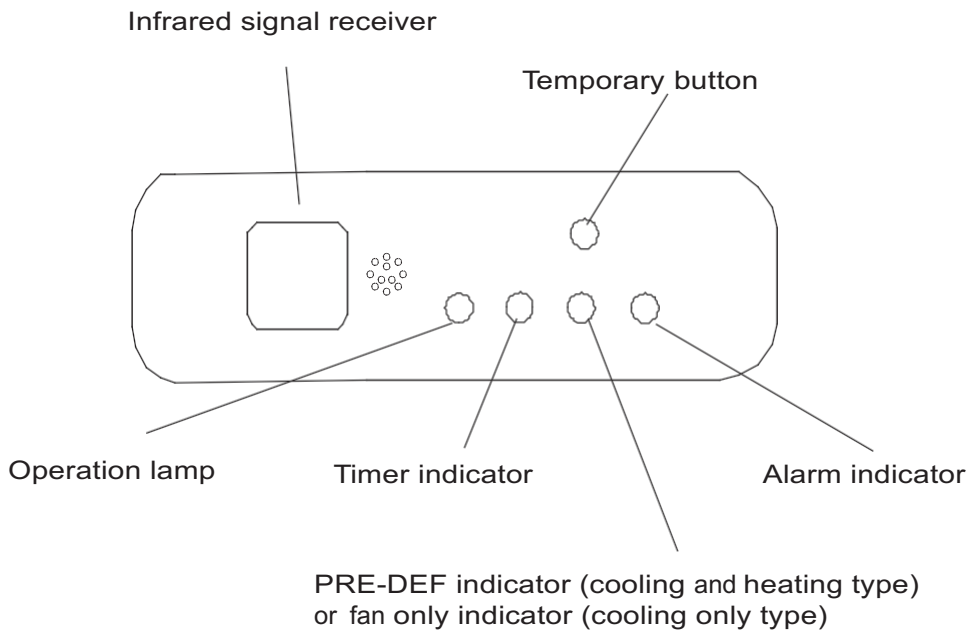
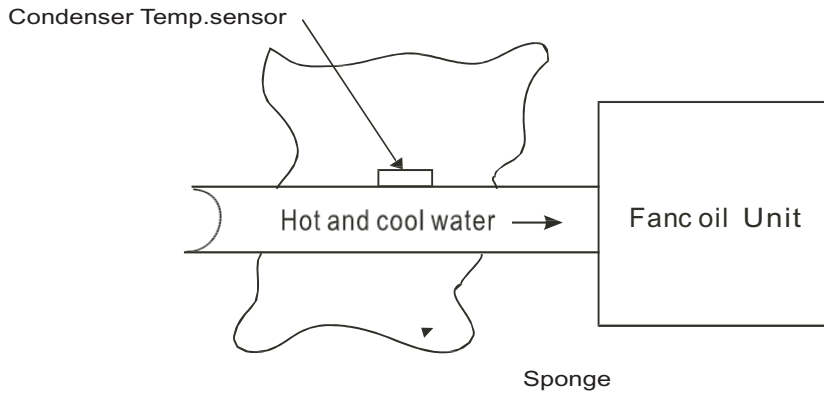


Fig.7-1

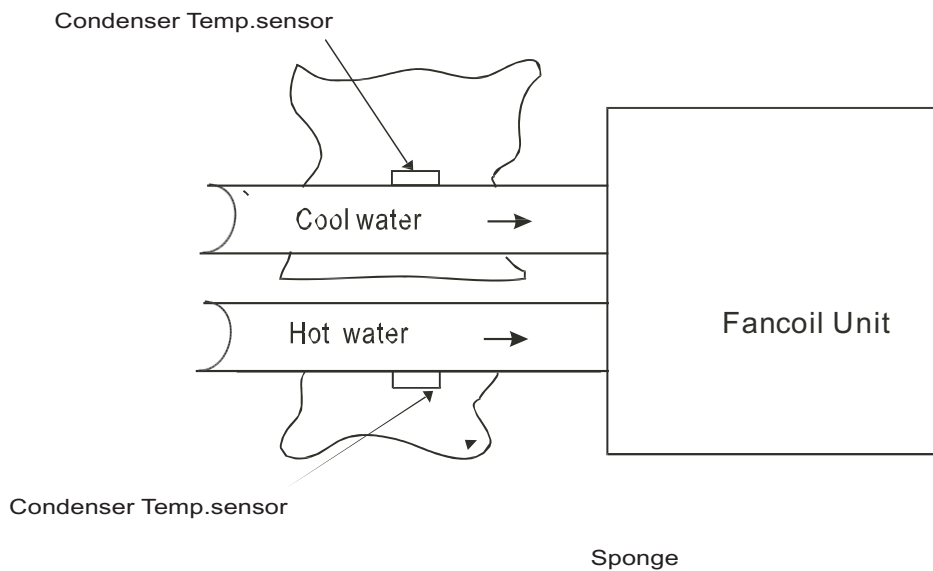
ATTACHED (I) Condenser Temp.sensor Installation Guide

1.Put Condenser Temp.sensor close to the pipe

CE-FCUKZ-01.1(K01-FC-2T.1)



CE-FCUKZ-02.1(K01-FC-4T.1)



2.Pack the Condenser Temp.sensor with sponge

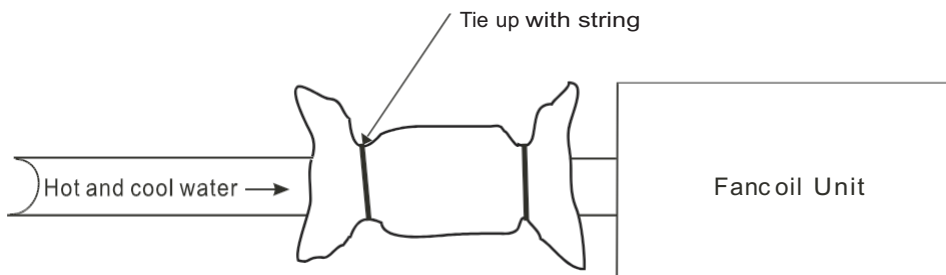


Table 1: Address mapping table of register in fancoil

The following addresses can be used: 03H。 04H(read), 06H (write in a single register), 10H (write in multiple holding register)			
Data content	Register address	Remark	
Running mode setting	1601 (PLC : 41602)	0x00: Shutdown mode 0x01: air supply mode 0x02: Cooling mode 0x03: Heating mode 0x04: Dehumidification mode 0x05: automatic mode The exception data function code is returned when other parameters are set. If only this register is written separately. The fan speed is set to stroke by default.	
Set temperature setting Ts	1602 (PLC : 41603)	Must be set within the normal temperature range. If the temperature setting range is exceeded, the exception code 03 will be returned. Temperature setting range is 17-30 °C Ts cannot be set in the air supply and dehumidification modes. Query Ts is 0	
Fan speed setting	1603 (PLC : 41604)	0x02: low wind 0x03: Stroke 0x04: high wind 0x05: automatic wind Return abnormal data function code when setting other parameters	
Timed boot time	1604 (PLC : 41605)	0~96 means no timing~24 hour timing	
Timed shutdown time	1605 (PLC : 41606)	0~96 means no timing~24 hour timing	
Indoor temperature T1	1606 (PLC : 41607)	0~240 means -20~100°C Calculation method: (temperature +5) * 2 + 30 This register can only be read and cannot be written	
Cold water coil temperature T2-C	1607 (PLC : 41608)		
Hot water coil temperature T2-H	1608 (PLC : 41609)		
Reserved	1609 (PLC : 41610)	Reserved	
Reserved	1610 (PLC : 41611)	Reserved	
Reserved	1611 (PLC : 41612)	Reserved	
Lock flag	1612 (PLC : 41613)	Bit0	Remote control lock 1: Yes. 0: No
		Bit1	00: Lock off or no lock
		Bit2	01: Lock the cooling. 10: Lock the heating.
		In addition to the above three. The other bits of this byte are all 0s.	
Pump status	1613 (PLC : 41614)	Bit0 drain pump 1: On. 0: off	
		In addition to the above two. The other bits of this byte are all 0s. This byte is read only.	
Fancoil failure status	1614 (PLC : 41615)	Bit14	EE water level detection failure
		Bit8	E8 fan speed detection is out of control
		Bit7	E7 EEPROM error

		Bit4	E4 T2B sensor failure
		Bit3	E3 T2A sensor failure
		Bit2	E2 T1 sensor failure
		In addition to the above two. The other bits of this byte are all 0s. This byte is read only.	
Protection status	1615 (PLC : 41616)	Bit1	P1 protection against cold or defrosting
		In addition to the above one. The other bits of this byte are all 0s. This byte is read only.	
Reserved	1616 (PLC : 41617)	Reserved	
Protection status 2	1617 (PLC : 41618)	Bit15: Ability is out of range; 0- no; 1- Bit14:0 Bit13:0 Bit12:0 Bit11:0 Bit10:0 Bit9:0 Bit8:0 Bit7:0 Bit6:0 Bit5:0 Bit4:0 Bit3:0 Bit2: Remote shutdown; 0-no; 1- Bit1: temperature is out of range; 0-no; 1- there is Bit0: anti-freeze flag; 0—no; 1—have	
Fancoil dialing code information 1	1618 (PLC : 41619)	Bit15: J1 power-down memory selection; 0-to; 1-1-no Bit14:0 Bit13:0 Bit12:0 Bit11: Ability S3_1, 2, 3, 4 (0--F) (high) Bit10: Ability S3_1, 2, 3, 4 (0--F) Bit9: Ability S3_1, 2, 3, 4 (0--F) Bit8: Ability S3_1, 2, 3, 4 (0--F) (low) Bit7: Refrigeration hysteresis S2_3 S2_4 (high position) Bit6: Cooling backlash S2_3 S2_4 (low level) Bit5: Heating backlash S2-1 s2-2 (high position) Bit4: Heating backlash S2-1 s2-2 (low level) Bit3: S1-4 electric auxiliary heat selection dial; 0-electric auxiliary heat + hot water; 1- electric auxiliary heat Bit2: S1-3 anti-cold wind selection; 0-conventional; 1-high temperature Bit1: S1-2 forced air selection; 0- no; 1- Bit0: S1-1 2/4 tube selection; 0-2 tube; 1-4 tube	
Wind dial dialing information 2	1619 (PLC : 41620)	Bit15:0 Bit14:0 Bit13:0 Bit12: Faulty port status Bit11: Pump port status Bit10: Heating valve port status Bit9: Refrigeration valve port status Bit8: Electrical auxiliary hot port status Bit7:0 Bit6:0 Bit5: Address ENC1 (0--63) (high) Bit4: Address ENC1 (0--63)	

		Bit3: Address ENC1 (0--63) Bit2: Address ENC1 (0--63) Bit1: Address ENC1 (0--63) Bit0: Address ENC1 (0--63) (lower)	
Version Information	1620 (PLC : 41621)	Display version number	
Baud rate	1640 (PLC : 41641)	The following baud rate support is available: 4800 9600 19200 38400	After changing these three parameters. The next time you communicate. Need to correspond to the modified serial port configuration. Otherwise the communication will not be successful. After powering up again. Revert to the default settings: 9600BPS /NO CHECK/ONE STOP
Check digit information	1641 (PLC : 41642)	No parity: 0x02 Odd parity: 0x01 Even parity: 0x00	

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