



Hi-Dom

**Installation Configuration and
Maintenance Manual**

Preamble

- This product is air-conditioning centralized monitoring and management system Hi-Dom. The system includes air-conditioning adapter, meter concentrator and service software.
- This air-conditioning adapter requires server (server installed with software which should be bought from field sales) in concert with Ethernet or Internet for use.
- Do not install the machine in the following locations, such as the places filled with gas or oil droplets, prone to cause fire, deformation, corrosion and damage to the machine.
 - Places with oil (including machine oil) splashes and steam.
 - Places such as springs with sulfide gas
- Do not install in the following locations, as this may cause corrosion.
 - coastal place with high salinity
 - acidic or alkaline environment
 - areas with high humidity
- Do not install in the following locations, as this may cause a malfunction or fault.
 - Exposure to direct sunlight.
 - places at high temperature.
 - places flooded with water.
 - places with poor ventilation
- When installed near the machine emitting electromagnetic waves, note that the electromagnetic wave emitting surface of the machine should not directly face this unit.
- To avoid the influence of electromagnetic waves, make sure the machines generating electromagnetic waves, such as radio, etc are kept 3m or more away from this unit.

1. System Components

1.1 Connection scheme

The connection scheme of this system is shown in Figure 1.1. This manual only describes the installation and configuration of Hi-Dom system, for other units in the system, please refer to the respective operating instructions supplied.

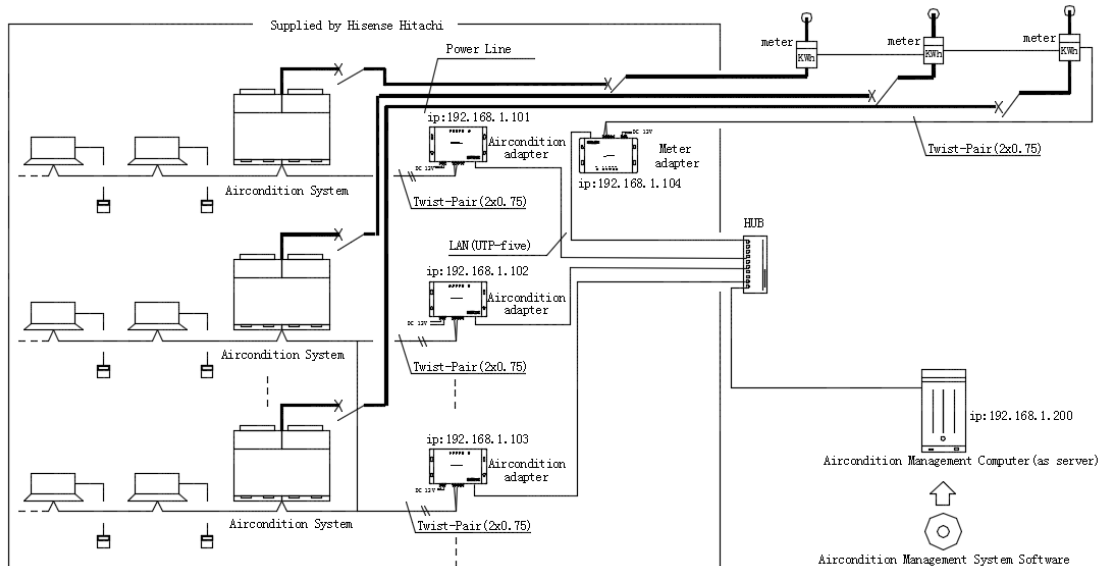


Figure 1.1 Connection scheme

- ※One air-conditioning management server can connect up to 32 air-conditioning adapters.
- ※One air-conditioning adapter can connect 128 indoor air conditioners (the number of outdoor units linked should not be bigger than 64, the united outdoor device composed of more modules is also treated as 1 outdoor unit).
- ※A single system can connect 4096 indoor units.

1.2 Name of aircondition adapter parts

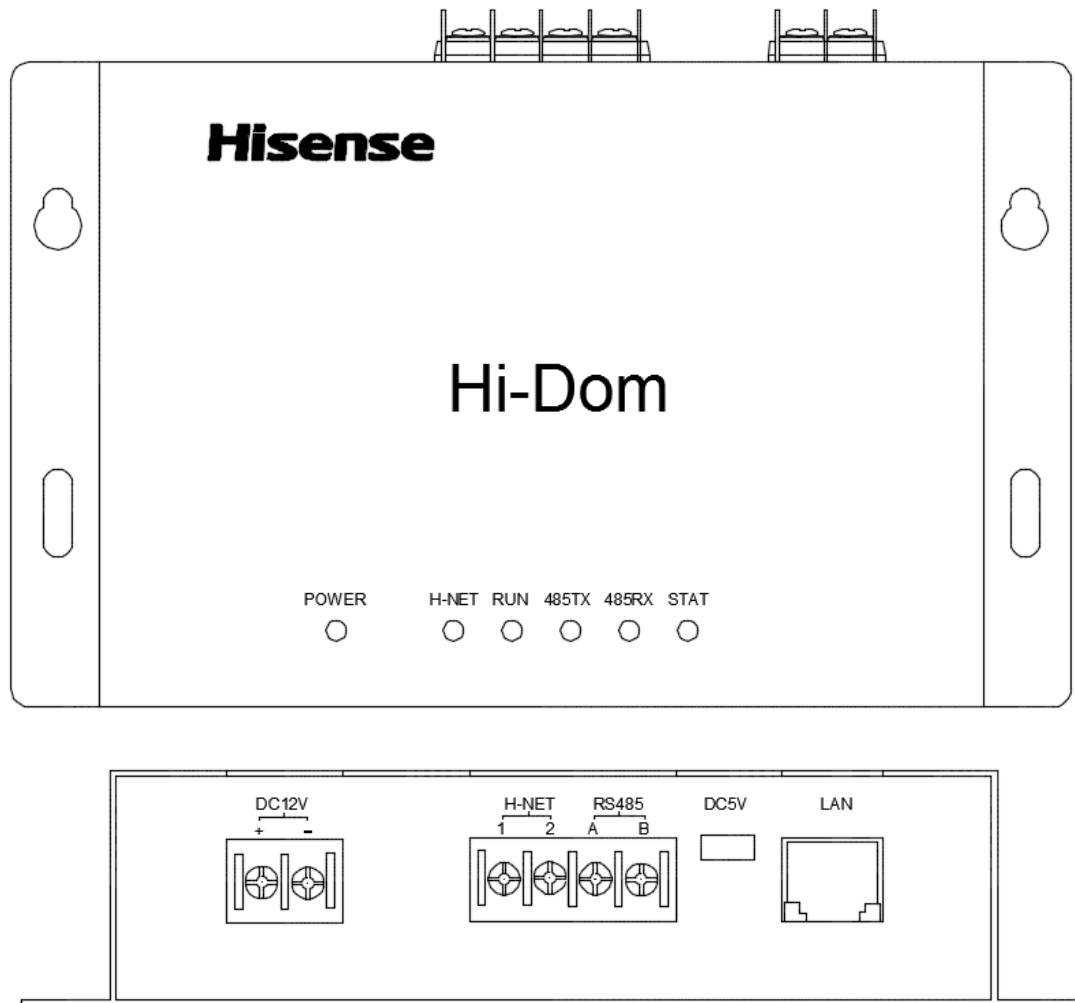


Figure 1.2 LED indicators

1.2.1 Description of LED indicators

POWER	Power display LED (red)	it is on when the unit is power-on
H-NET	Air-condition side communication display LED (yellow)	flashing when a signal is transmitted from H-NET system
RUN	working status display (green)	it is on when initialization and flashing during normal operation
485TX	RS485 signal output(yellow)	flashing when this unit has signal transmitted from RS485 interface
485RX	RS485 signal output(yellow)	flashing when there is signal transmitted from RS485 interface to the unit
STAT	status indicator (green)	it is on when completing factory reset /without H-NET access
RESET	reset button	

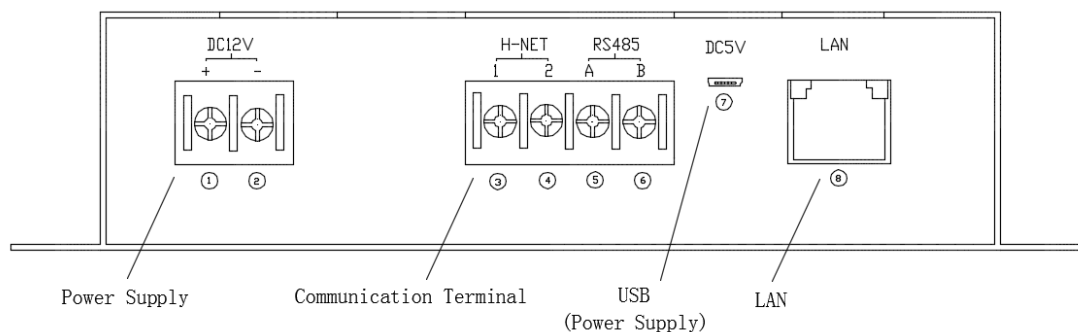


Figure 1.3 Terminal marking diagram

1.2.2 Terminal marking instruction

- ① : Power input(DC12V)-----Non-polarized
- ② : Power input(DC12V)-----Non-polarized
- ③ : H-NET signal input -----Non-polarized
- ④ : H-NET signal input -----Non-polarized
- ⑤ : RS485 A -----positive
- ⑥ : RS485 B -----negative
- ⑦ :USB(DC5V)
- ⑧ : LAN interface

※DC12V and DC5V power supply can not simultaneously access.

1.3 Specifications of aircondition adapter

The hardware specifications of this unit are shown in Table 1.1; communication specifications are shown in Table 1.2 and Table 1.3.

Table 1.1 Hardware Specifications

Item	Specification
Power Supply	DC 12V
Power consumption	Below 1.5W
Environmental conditions	Ambient temperature:0~40℃
	Ambient humidity:20~85%(non-condensing)
Dimensions	Length:180mm Width:110mm Height:40mm
Weight	0.55kg
Installation conditions	Using screws or guide rail for indoor installation Horizontal (installation) / vertical (wall-mounted)

Table 1.2 H-NET (communication wiring) Communication specifications

Item	Specification
------	---------------

Communication objects	Air-condition outdoor unit and indoor unit
Communication wiring	Non-polarized 2 core wire
Communication mode	Half-duplex communication
Communication synchronous mode	asynchronous communication
Communication speed	9600 bps
Wiring distance	Total length less than 1000m
Number of air conditioners connected	128 indoor units

Table 1.3 LAN(Ethernet) Communication Specification

Item	Specification
Communication objects	air conditioning management server, switch
Communication wiring	LAN(Ethernet)
Communication mode	IEEE802.3 standard(10BASE-T/100BASE-TX)
Wiring distance	100m

2. Air-conditioning adapter installation and wiring

2.1 Installation site

Please choose a place that meets the following conditions to install the unit.

- Please choose the site as specified in the [preamble] of this installation manual.
- This unit is to be mounted in the weak current control box.

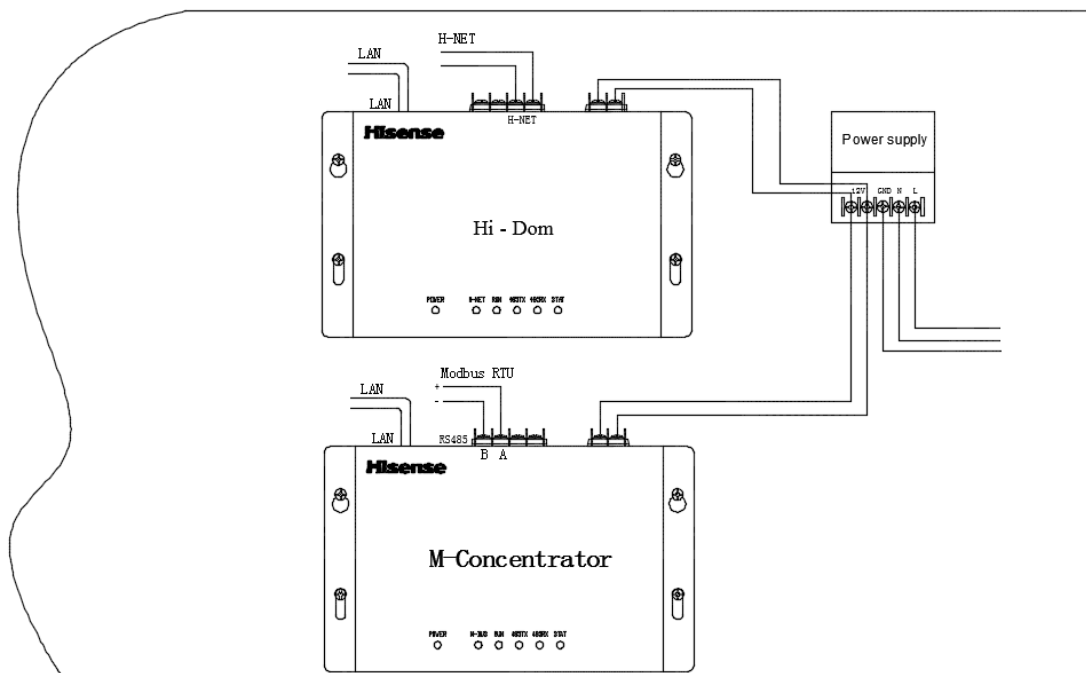


Figure 2.1 Installation diagram

2.2 Installation and wiring instructions

- (1) Air Conditioning adapter and meter adapter needs to be installed in the weak current control cabinet with screws for vertical mounting and guide rail for horizontal installation, in case of vertical installation with screws, certain gap is to be left for 30~50mm wiring around the adapter.
- (2) Communication and power supply terminals are barrier terminal blocks, rotate the terminals counterclockwise with appropriate Phillips screwdriver, then insert the wire into the terminal and rotate the terminal clockwise, wire installation is complete.
- (3) Refer to the air-conditioning wiring requirements for the wiring of air conditioner side.
- (4) LAN interface is RJ45 interface, insert it directly into LAN interface.

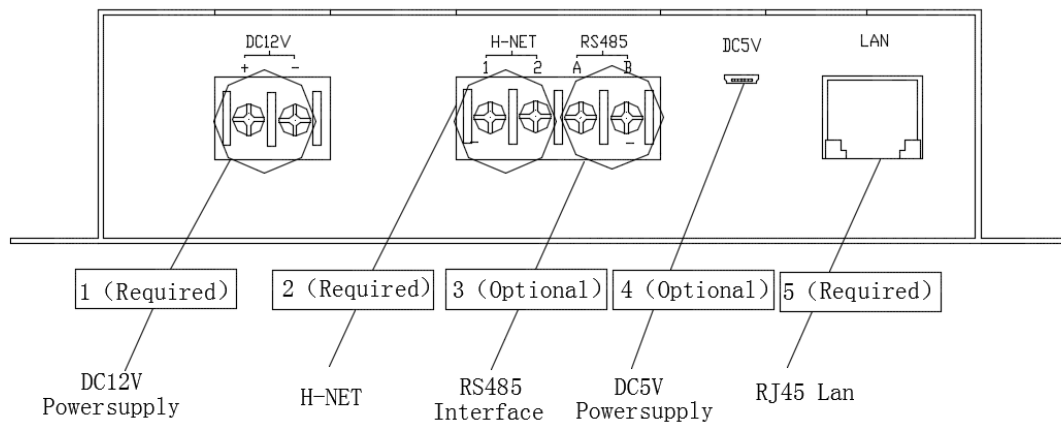


Figure 2.2 Wiring diagram of air condition adapter

For wiring specifications of air condition adapter in Figure 2.2 Wiring diagram, see Table 2.1
Wiring Specification of air condition adapter

Table 2.1 Wiring Specification of air condition adapter

No.	Wiring type	Voltage specification between lines	Usage of wiring	Distance of wiring	Cable Specification
1	power supply wiring	DC 12V	For power supply to air conditioning adapter, a must-have	—	0.75~1mm ²
2	H-NET wiring	DC 5V	For communication with air-conditioning, a must-have	Within 1000m	0.75~1mm ²
3	RS485 communications wiring	DC 5V	For communication with ModBus and other external communication control equipment, optional	Within 1000m	0.75~1mm ²

4	micro USB wiring	DC 5V	For power supply to Data Collector, optional	Within 1m	
5	LAN wiring	IEEE 802.3 standard	For communication with management server, a must-have	Within 100m	LAN(UTP-five)

3. System installation configuration and debugging

3.1 Service software installation

- ※ service software latest version can be downloaded from the website www.achelp.cn, username: admin, password: admin.

One-click installation, double-click the installation package, as shown in Figure 3.1:

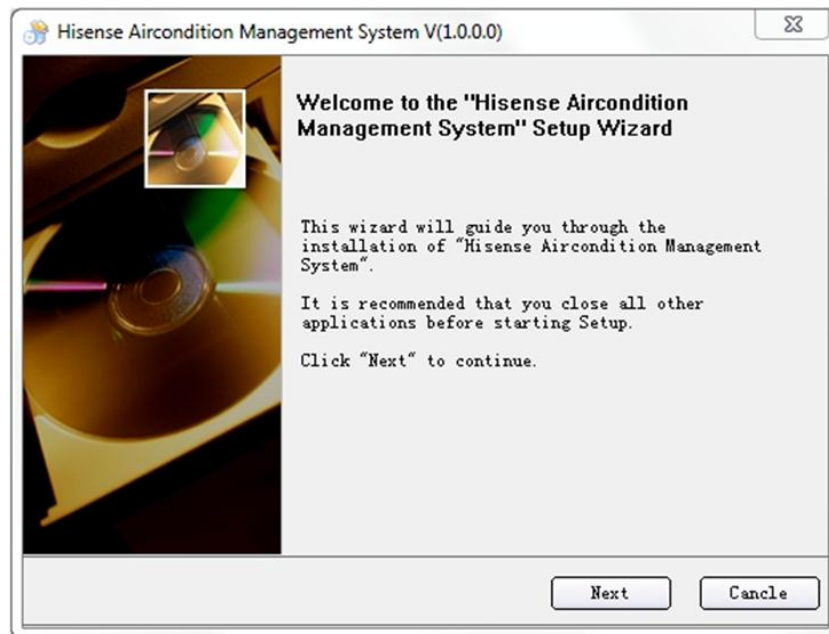


Figure 3.1 Installation start interface

Click “Next” until the end of the installation, as shown in Figure 3.2:

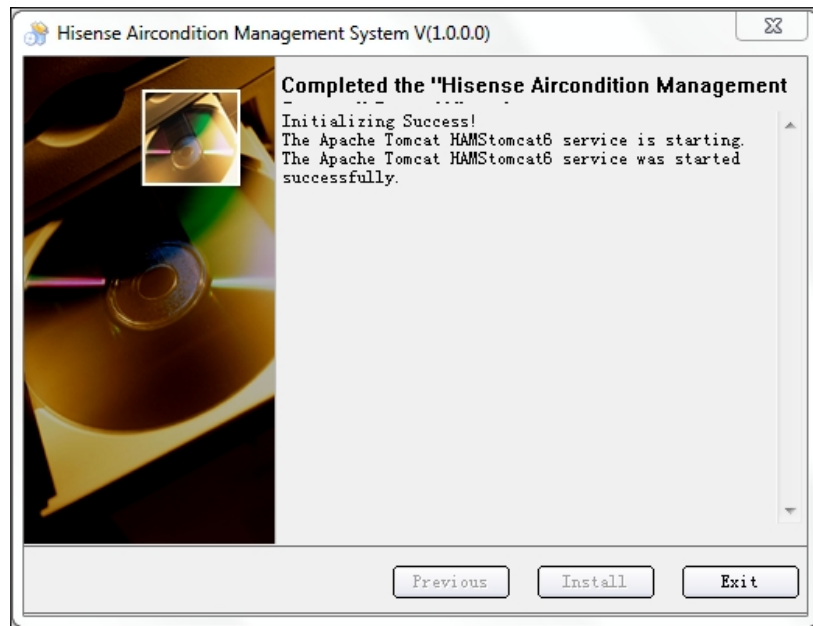


Figure 3.2 Installation completion interface

After installation is completed, login screen is automatic pop-up as shown in Figure 3.3, click on <Set the default browser> in the page, this browser is set as the default browser, a shortcut login system will be automatically created on the desktop. The default username of this system is admin, password is admin.

When first installed, the page pop-up takes 1 to 2 minutes, please be patient.

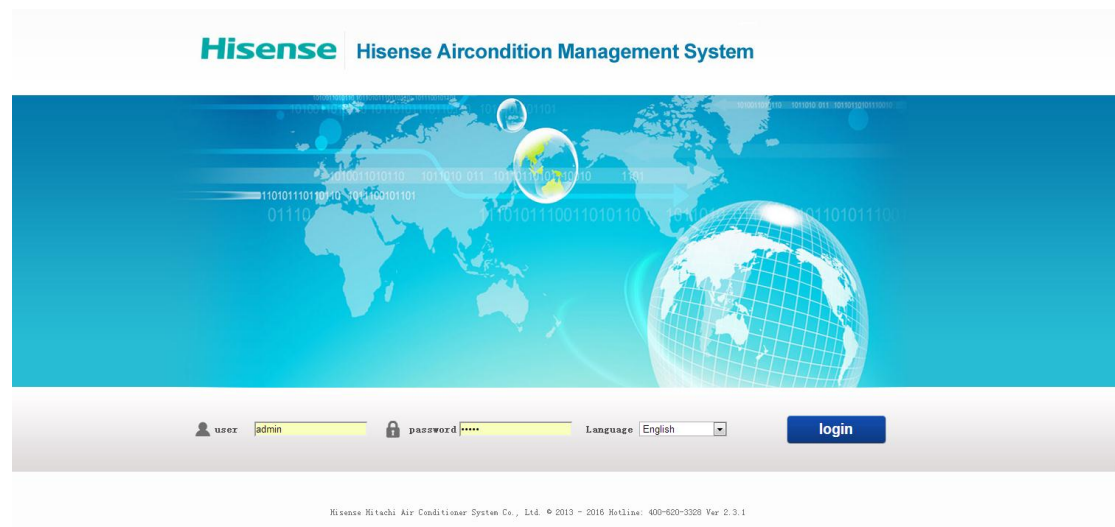


Figure3.3 Login screen

3.2 IP address setting

3.2.1 Air-conditioning centralized management server IP address setting

Due to different operating system of air conditioning centralized management server, refer to the IP address setting instructions of relevant operating system for its IP setting, but the IP address of the server must be in the same network segment with the IP address of air conditioning adapter.

The so-called same network segment refers to the first 3 segments of the IP address are the same(subnet mask: 255.255.255.0 is supposed),, for example, the first three segments of 192.168.1.2 and 192.168.1.101 are “192.168.1”, so 192.168.1.101 and 192.168.1.2 are in the same network segment.

3.2.2 Air-conditioning adapter IP address setting

The factory default IP of air conditioning adapter is set as:

IP address:192.168.1.101

Subnet mask: 255.255.255.0

Default adapter: 192.168.1.1

When used on site, the IP address of the air conditioning adapter is re-set according to network configuration on the site.

How to set the IP of air conditioning adapter:

1. First, prepare a server for air conditioning adapter IP address setting (laptop of debugging personnel or air conditioning centralized management server), set “Local IP” address of the server to:

IP address: 192.168.1.2

Subnet mask:255.255.255.0

Default adapter:192.168.1.1

2. Power on the adapter to be set, waiting for the adapter getting into working state (“RUN” indicator flashes, without considering other indicators),

3. Connect the server for setting directly to the air-conditioning adapter with a network cable, enter the IP address of the air-conditioning adapter in the server web browser address bar: 192.168.1.101, press carriage return, the browser displays the login screen as shown in Figure 3.4:

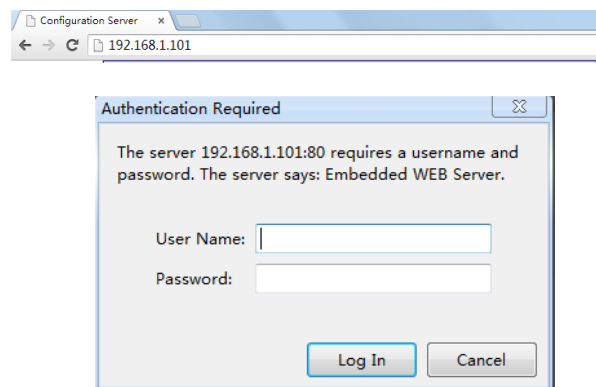


Figure 3.4 Setting and debugging login screen

4. Enter the user name: admin, with no password, click on the login, the interface appears after login as shown in Figure 3.5.

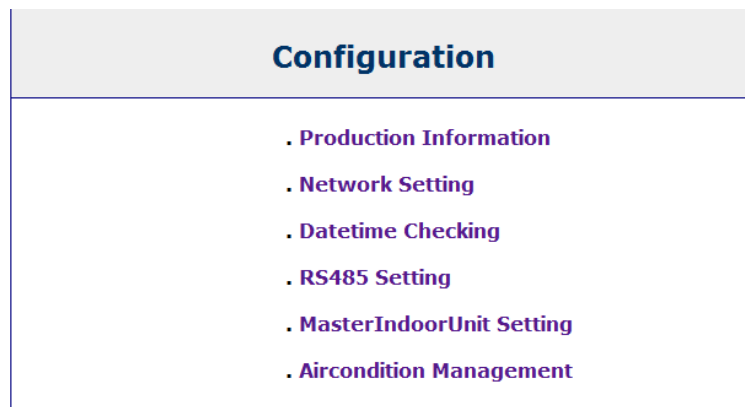


Figure3.5 Setting and debugging

Click <Network Settings> into the IP settings interface, as shown in Figure 3.6 (other options have nothing to do with IP address setting, do not change, otherwise it will lead to consequences of unable to return!)

The image shows the 'Network Settings' screen. At the top, there is a warning message: 'After you have changed the IP address, you need to change also the host IP address in you Internet browser to re-connect to target.Or you may permanently lose a connection until next hardware reset.The Lan IP address is 192.168.1.101 after hardware reset.If the reset button is pushed for 4 seconds as soon as hardware powered on,then RUN LED flicker and STAT LED is on.At this time,the hardware resetting is finished.' Below the warning is a table with two columns: 'Item' and 'Setting'.

Item	Setting
LAN IP Address	192.168.1.101
LAN Net Mask	255.255.255.0
Default Gateway	192.168.1.1
Remote Server IP Address	192.168.1.200
Remote Server Port	9899
Cloud Server Address	
DHCP Enable	0

At the bottom of the table, there are two buttons: 'Change' and 'Undo'.

Figure 3.6 Network Settings screen

5. According to the site conditions, it only needs to change <LAN IP Address> and <Remote Server IP Address> to change the settings of the IP address, <Remote Server IP Address> is the server IP address for installing air-conditioning system management software. Click <Change> button, as shown in Figure 3.7, the system prompts to confirm the information. Click <OK>, the air conditioning adapter IP address change is completed.

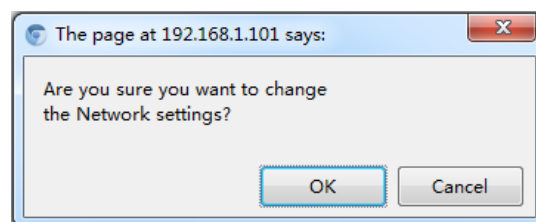


Figure 3.7 Network settings confirmation interface

Note:

- ※ If in need of check settings or re-set, enter the new set IP address in the browser address bar to enter the setting interface, or it cannot be logged in, for example, if the IP address is changed from factory setting of 192.168.1.101 to 192.168.1.105, it will display a prompt of inability to log in when entering 192.168.1.101 in the address bar, you need to enter the new address 192.168.1.105 to re-enter the adapter setting interface, so after

setting the IP address, the new IP address must be marked on a tag attached to the adapter to facilitate future maintenance.

- ※ Pay attention to the sequence of this operation, first set the computer's Local IP, then wait until the adapter is in the normal working state ("RUN" indicator flashes, without considering other indicators), then connect the computer to the air conditioning adapter with a network cable. Otherwise, if connect the computer to the adapter, then power on the adapter and set the computer's Local IP, it may not enter the setting interface.

3.3 Check the air conditioning connection of each adapter

If the air conditioning adapter has been connected with H-NET communication wire, when the adapter is powered on, it will automatically start searching for the air conditioning connected to it (in this case the "RUN" indicator is on), after the search is completed, "RUN" indicator starts flashing, the adapter is in the normal working state, if the "STAT" indicator is on at this time, indicating that no air conditioning is found, and if flashing, it indicates the adapter has found at least one air conditioner. Click <Aircondition Management> in the main interface of adapter, enter the air conditioning management interface, as shown in Figure 3.8:

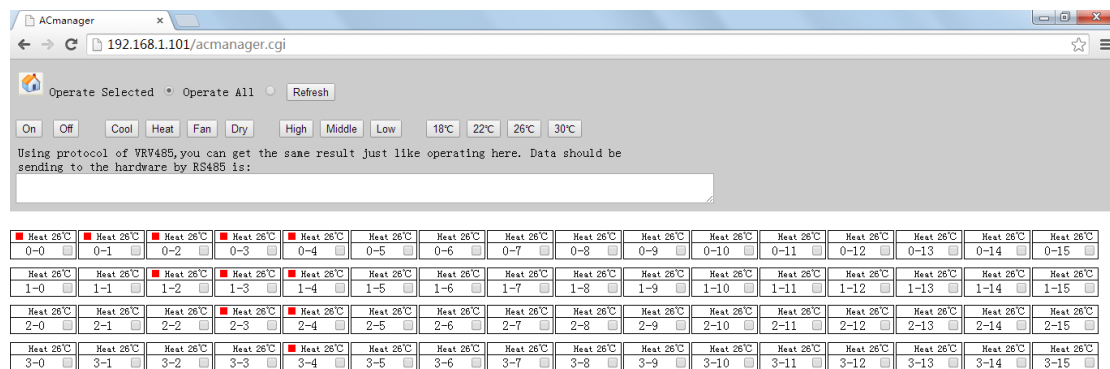


Figure 3.8 Air conditioning connection information

The interface shows the number of the indoor air conditioners connected and their addresses, as well as working condition of indoor air conditioners, as shown above, the "red flag" indicates air conditioning switched on, "Heat" means heating, "26 °C" indicates set temperature, "0-0" means air conditioning address. ("Refrigeration System number - address Number"). By pressing "ON", "OFF", "COOL" and other buttons, the air-conditioning can be controlled, "Refresh" button is to refresh and get the latest state of air conditioning (Note: Only by pressing this button, the latest status of air conditioner can be obtained)

When "Operate Selected" is selected, you need to check the indoor unit you want to control, and then press the button you want to control, the indoor unit selected will respond as per the specified button action.



When "Operate All" is selected, press the control button, all indoor units connected to this adapter will act correspondingly as per the specified button action.

Operate All ☐

3.4 Adding adapters and basic configuration table export

※ if the air conditioning configuration information table has been completed, all operations in 3.4 can be omitted

3.4.1 Adding air conditioning adapter

View Hi-Dom system login page and log into the system to enter <check debugging> -> <air-condition adapter maintenance>, click <add records> button to add air conditioning adapters, after adding and editing is completed, click <save added records> to save, for changes, double-click the left mouse button to modify the content, and click <to save the change record> to save, as shown in Figure 3.9

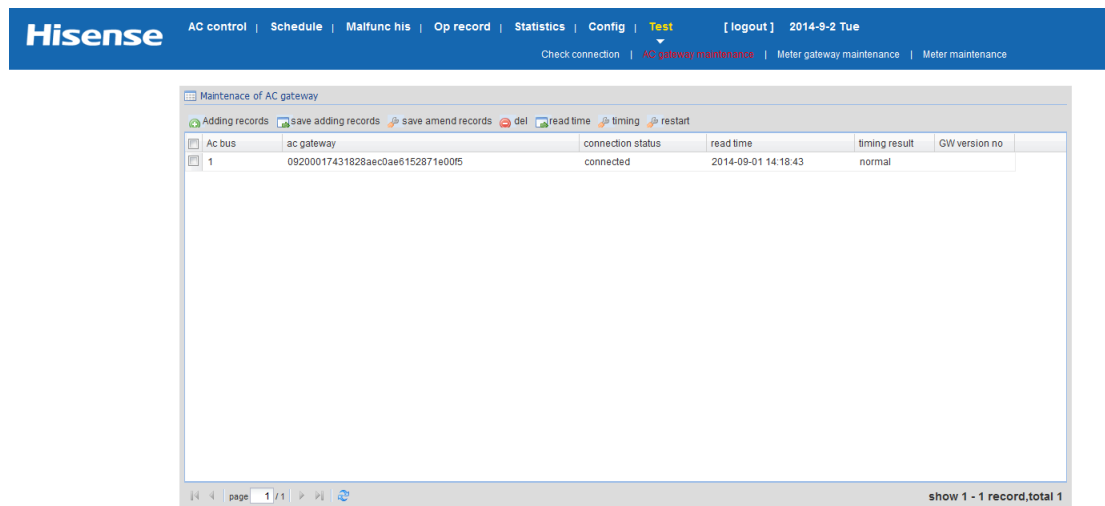


Figure3.9 Air conditioning adapter maintenance interface

※Air-conditioning bus number is the actual H-NET line number, and the numbering of air conditioning adapter or it can be numbered as 1, 2, 3..., it is permitted as long as it is not repeated.

※Air conditioning adapter ID is the unique identification for air conditioning adapter, consisting of a total of 32 letters or numbers set during the production, it is not changed after leaving factory and can be obtained from the nameplate on the back of the adapter or from WEB configuration page inside it, the access method to the WEB configuration page is as follows:

In the Adapter Configuration main interface, click <Production Information> to enter the factory information interface, as shown in Figure 3.10:

Configuration

Production Information

Item	Details
Model	HCCS-H128H2C1YM
MAC	1ef00017431828ae5ead6152811e00f5
Hardware Version	Ver 1.1.2.0

Figure3.10 Factory information interface of air condition adapter

“MAC ” here is “air conditioning Adapter ID”, it can be copied for use.

Repeat this operation to add all air conditioning adapters into Hi-Dom system

After all adapters are added and saved successfully, click <read time> to read adapter time, and click <timing> for revision of adapter internal time. if air conditioning adapter is connected to the computer properly, and “air conditioning adapter ID” is correct, <connection status> will display <connected>, <timing result> will display <normal>; otherwise it will display <not connected> and <abnormal>, in this case, please check the IP address settings, cable connections, switch power supply and air conditioning adapter ID, etc.

3.4.2 Adding meter reading adapters

Enter <Check debugging> -> <electricity and gas meter adapter maintenance> page, as shown in Figure 3.11, for the configuration process, please refer to air conditioning adapter adding.

Hisense

[AC control](#) | [Schedule](#) | [Malfunc his](#) | [Op record](#) | [Statistics](#) | [Config](#) | Test | [\[logout \]](#) | 2014-9-2 Tue

[Check connection](#) | [AC gateway maintenance](#) | Meter gateway maintenance | [Meter maintenance](#)

The meter gateway maintenance

[Adding records](#) | [save adding records](#) | [save amend records](#) | [del](#) | [read time](#) | [timing](#)

gateway	bus	connection status	type	read time	timing result
2	e1dffb3667e4512ec524aebde1ff0a	connected	wall meter	2014-09-01 14:22:03	normal

show 1 - 1 record, total 1

Figure 3.11 Metering adapter maintenance interface

※The bus line number of meter reading is the actual wire number of electricity meters, i.e. the numbering of the meter reading adapter, NOTE: the meter reading bus number shall not replicate the bus number of air conditioning.

※Meter reading adapter ID is the unique identification for meter reading adapter, consisting of a

total of 32 numbers, which is not changed after leaving factory. In the Adapter Configuration main interface, click <Production Information> to enter the factory information interface, as shown in Figure 3.12:

Production Information	
Item	Detials
Model	MC-485
MAC	0f70000729a128ae6aa46452861e00f5
Hardware Version	Ver 1.1.1.1

Figure3.12 Factory information interface of M-Concentrator

3.4.3 Air conditioning connection search and save

After all air-conditioning adapters and meter reading adapters are added, click <Search> button in <check debugging> -> <Connection Search and Save> page, as shown in Figure 3.13, to search the air conditioning connection information. After the search is completed, all air-conditioning connections can be shown, click on <Save> and then click on <Download air conditioning connection information table> to export the basic configuration information table.

Hisense					AC control Schedule Malfunc his Op record Statistics Config Test [logout] 2014-9-2 Tue				
					Direct connection AC gateway maintenance Meter gateway maintenance Meter maintenance				
search save Download the result					Current page: 1 Test » All conditioner connecting search				
search result									
Gateway id	outdoor machine address	indoor machine address	Model	Capacity					
5 09200017431828aec0ae6152871e00f5	1	5	RCI	140					
6 09200017431828aec0ae6152871e00f5	1	6	RPWII	63					
7 09200017431828aec0ae6152871e00f5	1	7	RCI	140					
8 09200017431828aec0ae6152871e00f5	1	8	RCI	45					
9 09200017431828aec0ae6152871e00f5	1	9	RCI	112					
10 09200017431828aec0ae6152871e00f5	1	10	RCI	140					
11 09200017431828aec0ae6152871e00f5	1	11	RCI	112					
12 09200017431828aec0ae6152871e00f5	1	12	RCI	112					
13 09200017431828aec0ae6152871e00f5	1	13	RCI	56					
14 09200017431828aec0ae6152871e00f5	1	14	RCI	112					
15 09200017431828aec0ae6152871e00f5	1	15	RCI	56					
16 09200017431828aec0ae6152871e00f5	2	1	RCI	56					
17 09200017431828aec0ae6152871e00f5	2	2	RPWII	28					
18 09200017431828aec0ae6152871e00f5	2	3	RCI	56					
19 09200017431828aec0ae6152871e00f5	2	4	RCI	56					
20 09200017431828aec0ae6152871e00f5	3	2	RCI	56					
21 09200017431828aec0ae6152871e00f5	3	3	RCI	56					
22 09200017431828aec0ae6152871e00f5	3	4	RCI	56					
23 09200017431828aec0ae6152871e00f5	3	5	RCI	56					
24 09200017431828aec0ae6152871e00f5	3	6	RCI	56					
25 09200017431828aec0ae6152871e00f5	3	7	RCI	56					
26 09200017431828aec0ae6152871e00f5	3	8	RCI	56					
27 09200017431828aec0ae6152871e00f5	3	9	RCI	56					
page 1 / 7					show 1 - 121 record,total 121				

Figure 3.13 Connection search interface

3.5 Edit and lead in basic configuration table

Edit the basic configuration table according to actual location for the air conditioner and electricity meter. See Table 3.1 for header and meaning of the configuration information table.

Table 3.1 Header and Meaning of Configuration Information Table

Name of Column	Meaning	Remarks
----------------	---------	---------

ID	Increase progressively according to the table (figure larger than 1)	Required
GW_ID	Air conditioner adapter mac address (32 digits) can be obtained from nameplate on back of the adapter or form the adapter's inner web configuration page	Required
GW_Line NO.	Adapter Serial No. (Figure Larger than 1)	Required
OU_ address	Address of Outdoor unit (Figure Larger than 1)	Required
IU_ address	Address of Indoor unit (Figure Larger than 1)	Required
Building	Building Catalog Level I, Such as: Building A	Required
Floor	Building Catalog Level II, Such as: F3	Required
Room	Building Catalog Level III, Such as: Room 202	Required
Tenant	Lessee Using Air Conditioner	Required
Tenant_NO.	Lessee Serial No.; Be use for ordering the billing statement (Figure Larger than 1)	Required
IU_model	Model of indoor unit	Required
IU_capacity	Capacity of indoor unit (Figure Larger than 1)	Required
OU_Alias	Alias of outdoor unit (Letters and Figures; Mark installation position or service area of outdoor unit)	Required
OU_model	Model of outdoor unit	Required
OU standby Power (×1W)	Spare (Figure Larger than 1); Blank space is not allowed.	Required
Meter GW_ID	Meter Reading Adapter mac Address (32 Digits) can be obtained from nameplate on back of the adapter or form the adapter's inner web configuration page	Optional (Fill when connecting electricity meter)
Meter GW_line_NO	Meter Reading Adapter Serial No. (Figure Larger than 1. Note: It shall be not the same with other meter reading adapter line numbers or air conditioner adapter line numbers)	Optional (Fill when connecting electricity meter)
OU_meter1	Electricity Meter Add. (Figure of 8~10 Digits)	Optional (Fill when connecting electricity meter)
Meter current transformer coefficient	If electricity meter is connected with current transformer, it shall indicate ratio of transformation for current transformer (Figure Larger than 1)	Optional (Fill when connecting electricity meter) Actual electricity consumption is number of degree obtained by meter

		reading multiplied by multiple of ratio of transformation.
Meter GW_ID	Meter Reading Adapter mac Address (32 Digits) can be obtained from nameplate on back of the adapter or form the adapter's inner web configuration page	Optional (Fill when connecting electricity meter)
Meter GW _ line_NO	Meter Reading Adapter Serial No. (Figure Larger than 1. Note: It shall be not the same with other meter reading adapter line numbers or air conditioner adapter line numbers)	Optional (Fill when connecting electricity meter)
OU_meter2	Electricity Meter Add. (Figure of 8~10 Digits)	Optional (Fill when connecting electricity meter)
Meter current transformer coefficient	If electricity meter is connected with current transformer, it shall indicate ratio of transformation for current transformer (Figure Larger than 1)	Optional (Fill when connecting electricity meter) Actual electricity consumption is number of degree obtained by meter reading multiplied by multiple of ratio of transformation.
Meter GW_ID	Meter Reading Adapter mac Address (32 Digits) can be obtained from nameplate on back of the adapter or form the adapter's inner web configuration page	Optional (Fill when connecting electricity meter)
Meter GW _ line_NO	Meter Reading Adapter Serial No. (Figure Larger than 1. Note: It shall be not the same with other meter reading adapter line numbers or air conditioner adapter line numbers)	Optional (Fill when connecting electricity meter)
OU_meter3	Electricity Meter Add. (Figure of 8~10 Digits)	Optional (Fill when connecting electricity meter)
Meter current transformer coefficient	If electricity meter is connected with current transformer, it shall indicate ratio of transformation for current transformer (Figure Larger than 1)	Optional (Fill when connecting electricity meter) Actual electricity consumption is number of degree obtained by meter reading multiplied by multiple of ratio of transformation.

※ In actual configuration table, <Meter GW_ID>, <Meter GW _ line_NO>, <OU_meter> and <Meter current transformer coefficient> can have repeated multi columns for the united

outdoor device composed of more modules,one electricity meter for each module.

Figure 3.14 is a configuration information example for reference.

When editing is completed, enter into the <Configuration Information>-><Installation Information Import>Page, as shown in Fig. 3.15. Click <Select Document> to select edited configuration document, then click <Upload> to lead in the configuration document.

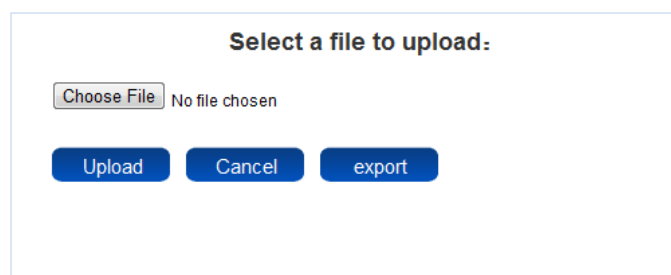


Fig. 3.15 Installation Information Import Page

Note:

If air conditioner connection information table is prepared and perfected before installing Hi-Dom system, all steps in 3.4 can be directly skipped and it just needs to lead in the installation information configuration table from here.

3.6 Issue electricity meter address

Enter into the <Inspection and Debugging>-><Electricity Meter and Gas Meter Maintenance> page as shown in Fig. 3.16. Before issuing address, the page matching status displays <Require Matching>, then click <Issue Address> to issue electricity meter address. When electricity meter address is issued, the page matching status will display <Matching Successful> as shown in Fig. 3.17, and the system matching is completed.

Hisense AC control Schedule Malfunc his Op record Statistics Config Test [logout] 2014-9-2 Tue									
Check connection AC gateway maintenance Meter gateway maintenance Meter maintenance									
meter maintenance Sending address Check result Read now Read meter result									
gateway bus	address	type	meter ratio	match status	operation	meter result	time		
2	0011104631	watt meter	1	need match	amend del detail				
2	0011104731	watt meter	1	need match	amend del detail				
2	0011104732	watt meter	1	need match	amend del detail				
2	0010021176	watt meter	1	need match	amend del detail				
2	0010021177	watt meter	1	need match	amend del detail				

Fig. 3.16 Electricity Meter Maintenance Page

meter maintenance Sending address Check result Read now Read meter result									
gateway bus	address	type	meter ratio	match status	operation	meter result	time		
2	0011104631	watt meter	1	match success	detail				
2	0011104731	watt meter	1	match success	detail				
2	0011104732	watt meter	1	match success	detail				
2	0010021176	watt meter	1	match success	detail				
2	0010021177	watt meter	1	match success	detail				

Fig. 3.17 Complete issuing configuration of electricity meter address

4. Air Conditioner Adapter Power Supply Input

4.1 Power Supply Input

(1) Firstly, confirm that power normal (DC 12V),H-NET and LAN connection is normal, then supply power to the machine.

(2) When power supply is input, POWER light of adapter is lightened normally (power supply indicator) and RUN light (operation indicator) is lightened normally until air conditioner searching is completed when the RUN light will start flickering.

(3) When air conditioner searching is completed, the RUN light will start flickering. If the adapter fails to search out air conditioner, STAT will be lightened normally. If at least 1 air conditioner is searched out, the STAT light won't be lightened.

(4) When **the machine** works normally, POWER light will be lightened normally, H-NET light will flicker irregularly and RUN light will flicker regularly.

4.2 Reset to Defaults

When it is electrified and RUN light is lightened normally, it can be reset to defaults in the first 15 seconds. At this time, when long pressing the Reset Button for 4 seconds, the RUN light will die out. At this time, if stop pressing the Reset Button, the RUN light will flicker, the STST light will be lighted normally after 2 seconds, and resetting is completed. When electrify again, the system will be reset to defaults.

※ Conduct air conditioner searching after RUN is lighting for 15 seconds. It is invalid pressing the RESET button at this time.

※ Reset to default will only empty information of timer and air conditioner locking, ip address will be recovered to 192.168.1.101, and billing related information won't be emptied.

4.3 Normal/Abnormal Display

Refer Table 4.1 for normal/abnormal display of working conditions of the machine

Table 4.1 Normal/abnormal display

LED Name	Expressed Item	Lighting Conditions	Lighting-off Conditions
POWER	Power	Power on	Power off
RUN	working conditions of the machine	Often lighting when the machine implements air conditioner connection confirmation Lighting and dying flickering in frequency of 0.5 seconds when the machine is in normal working	Lighting and dying flickering in frequency of 0.5 seconds when the machine is in normal working
485TX	RS485 sends out signal status	When sending out data on RS485	When it fails to send out data on RS485
485RX	RS485 receives signal status	When receiving data on RS485	When it fails to receive data on RS485
H-NET	H-NET Communication Status	·When data has been received on H-NET ·When data has been sent out on H-NET	·When data fails to be received on H-NET ·When data fails to be sent out on H-NET
STAT	Status Display	·No H-NET system connection Complete resetting	Other conditions
LAN	LAN Communication Status	Light when connection is confirmed on LAN Flicker when data is received or sent out on LAN	When no connection signal is received on LAN

5. Maintenance and After-sale Services

5.1 Handling Methods in Abnormalities

Refer to Table 5.1 – Handling Methods in Abnormalities for methods judging and handling abnormal conditions.

Table 5.1 – Handling Methods in Abnormalities

NO.	Phenomenon	Content of Inspection	Handling Method
1	It cannot connect air conditioner and meter reading adapter in	Check whether air conditioner and meter reading adapter mac address is set correctly in adapter maintenance.	Log in adapter configuration page and confirm mac address configuration.
		Check whether ip address of	Set ip address of server and adapter

	power supply.	server is set correctly.	ip address into the same segment.
		Check whether ip address of server is set correctly on the air conditioner and meter reading adapter configuration page.	Log in air conditioner and meter reading adapter configuration page and confirm ip address configuration of server.
		Check whether LAN wiring is connected on the machine.	Please connect LAN wiring of the machine. Please confirm whether terminals are matched.
2	Air conditioner searching connection confirmation cannot be completed in power supply	Check whether the machine has connected H-NET wiring.	Please connect H-NET wiring of the machine.
		Check whether terminal resistance setting on H-NET wiring is normal.	On H-NET wiring, only 1 piece of terminal resistance can be connected.
		Check whether address of air conditioner is set normally.	Please refer to Letter of Installation Spot Check Essentials and Operation Instruction for air conditioner for setting indoor and outdoor machine addresses again.
		Check whether H-NET wiring is disconnected.	Please check wiring connection conditions.
		Check whether all air conditioners connected have had power.	Please electrify all connected air conditioners.
		Check whether H-NET wiring is of specified specifications.	Please use cable with sectional area larger than 0.75 and total length within 1000m.
		Check whether H-NET LED is lighting/dying out continuously.	· Please confirm whether H-NET wiring is connected normally. · Check whether H-NET loop protection fuse inside the machine is fused. · If above conditions are all confirmed normal, it may be fault of the machine. Please contact with the nearest repair center.
3	Be unable to communicate with air conditioner management server	Check wheter LAN wiring is connected on the machine.	Please check LAN wiring of the machine. Please check whether terminals are matched.
		Check whether LAN wiring is connected on air conditioner dedicated server.	Please connect LAN wiring used for managing computer. Please confirm whether terminals are matched.

		Check whether IP address for air conditioner dedicated server is in the same segment with IP address of the machine. Check whether PING to the machine from the management server is available.	Initial IP address of the machine is 192.168.1.101. Please check network conditions with common PC instead of the machine.
		Check whether it is LAN wiring of specified specifications.	Please use LAN cable above Category 5 below 100m.
		Check whether LAN wiring is abnormal (disconnection, short circuit) (include HUB wiring conditions when using HUB)	Replace with normal product.
		Check whether managing computer is abnormal.	Replace with normal product.
		Check whether firewall of managing computer is closed.	Close firewall of the operation system.
		Doesn't LAN LED die out?	If managing computer and LAN wiring (including connection) are normal, it may be fault of the machine. Please contact with the nearest repair center.
4	It fails to control the air conditioner from the management server	Check whether all air conditioners connected are electrified.	Check whether the controlled air conditioner is electrified.
		Check whether settings of terminal resistance on H-NET wiring are normal.	Only one terminal resistance on H-NET wiring is connected.
		Check whether address settings of air conditioner is normal.	Please refer to Letter of Installation Spot Check Essentials and Operation Instruction for air conditioner for setting indoor and outdoor machine addresses again.
		Check whether H-NET wiring is disconnected.	Please check connection of H-NET wiring.
		Check whether H-NET wiring is parallel with power wiring.	Wiring space shall be kept above 150mm.
		Check whether it is H-NET wiring of specified specifications.	Please use cable with sectional area larger than 0.75 and total length within 1000m.
		Check whether H-NET LED is always lighting-off.	Please check connection of H-NET wiring.
		Check whether RUN light is always lighting-on.	It may be fault of the machine. Please contact with the nearest repair center.

5.2 Regular Spot Check

In order to guarantee normal operation of the air conditioner system including this system, please conduct spot check to at least following content.

☐ (1) Surrounding environment

- Check whether temperature of the machine is very high.
- Check whether temperature in installation weak current control cabinet is very high.
- Check whether there are dust, powder, wiring scraps, etc. in the machine.

☐ (2) LED Display

- Check whether POWER light is always lighting-on.
- Check whether RUN light is always flickering.
- Check whether H-NET and LAN are always in lighting-off or lighting-on status.

☐ (3) Connection Part

- Check whether wiring connection conditions are normal.

Changes will be made for product improvement and other reasons without notice.

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Printed in XXXXX Year XXXX Month

ID	GW_ID	GW_ Line NO.	OU_ address	IU_ address	Building	Floor	Room	Tenant	Tenant_NO	IU_model	IU_ capacity	OU_Alias	OU_model	OU_ standby Power(×1W)	Meter GW_ID	MeterGW_ line_NO	OU_meter1	Meter current transformer coefficient
1	0be0ff12400429aef9a46c52871e00f5	1	1	1	A	1F	Room_A101	Tom	1	RPI-28FSN6Q	28	AC_OU_1	RAS-560FSN6Q	5	ffffffffffffffffffffc0a88a69	2	3789654	1
2	0be0ff12400429aef9a46c52871e00f5	1	1	2	A	1F	Room_A102	Antonio	2	RPI-28FSN6Q	28	AC_OU_1	RAS-560FSN6Q	5	ffffffffffffffffffffc0a88a69	2	3789654	1
3	0be0ff12400429aef9a46c52871e00f5	1	1	3	A	1F	Room_A103	Jacob	3	RPI-28FSN6Q	28	AC_OU_1	RAS-560FSN6Q	5	ffffffffffffffffffffc0a88a69	2	3789654	1
4	0be0ff12400429aef9a46c52871e00f5	1	1	4	A	1F	Room_A104	Jacob	4	RPI-28FSN6Q	28	AC_OU_1	RAS-560FSN6Q	5	ffffffffffffffffffffc0a88a69	2	3789654	1
5	0be0ff12400429aef9a46c52871e00f5	1	1	5	A	1F	Room_A105	Alexis	5	RPI-28FSN6Q	28	AC_OU_1	RAS-560FSN6Q	5	ffffffffffffffffffffc0a88a69	2	3789654	1
6	0be0ff12400429aef9a46c52871e00f5	1	1	6	A	1F	Room_A106	Alexis	6	RPI-28FSN6Q	28	AC_OU_1	RAS-560FSN6Q	5	ffffffffffffffffffffc0a88a69	2	3789654	1
7	0be0ff12400429aef9a46c52871e00f5	1	1	7	A	1F	Room_A107	Michael	7	RPI-28FSN6Q	28	AC_OU_1	RAS-560FSN6Q	5	ffffffffffffffffffffc0a88a69	2	3789654	1
8	0be0ff12400429aef9a46c52871e00f5	1	1	8	A	1F	Room_A108	Michael	8	RPI-28FSN6Q	28	AC_OU_1	RAS-560FSN6Q	5	ffffffffffffffffffffc0a88a69	2	3789654	1
9	0be0ff12400429aef9a46c52871e00f5	1	1	9	A	2F	Room_A201	Emily	9	RPI-28FSN6Q	28	AC_OU_1	RAS-560FSN6Q	5	ffffffffffffffffffffc0a88a69	2	3789654	1
10	0be0ff12400429aef9a46c52871e00f5	1	1	10	A	2F	Room_A202	Emily	10	RPI-28FSN6Q	28	AC_OU_1	RAS-560FSN6Q	5	ffffffffffffffffffffc0a88a69	2	3789654	1
11	0be0ff12400429aef9a46c52871e00f5	1	1	11	A	2F	Room_A203	Madison	11	RPI-28FSN6Q	28	AC_OU_1	RAS-560FSN6Q	5	ffffffffffffffffffffc0a88a69	2	3789654	1
12	0be0ff12400429aef9a46c52871e00f5	1	1	12	A	2F	Room_A204	Madison	12	RPI-28FSN6Q	28	AC_OU_1	RAS-560FSN6Q	5	ffffffffffffffffffffc0a88a69	2	3789654	1
13	0be0ff12400429aef9a46c52871e00f5	1	1	13	A	2F	Room_A205	Edward	13	RPI-28FSN6Q	28	AC_OU_1	RAS-560FSN6Q	5	ffffffffffffffffffffc0a88a69	2	3789654	1
14	0be0ff12400429aef9a46c52871e00f5	1	1	14	A	2F	Room_A206	Daniel	14	RPI-28FSN6Q	28	AC_OU_1	RAS-560FSN6Q	5	ffffffffffffffffffffc0a88a69	2	3789654	1
15	0be0ff12400429aef9a46c52871e00f5	1	1	15	A	2F	Room_A207	Daniel	15	RPI-28FSN6Q	28	AC_OU_1	RAS-560FSN6Q	5	ffffffffffffffffffffc0a88a69	2	3789654	1
16	0be0ff12400429aef9a46c52871e00f5	1	1	16	A	2F	Room_A208	Daniel	16	RPI-28FSN6Q	28	AC_OU_1	RAS-560FSN6Q	5	ffffffffffffffffffffc0a88a69	2	3789654	1
17	0be0ff12400429aef9a46c52871e00f5	1	2	1	A	3F	Room_A301	Erin	17	RPI-28FSN6Q	28	AC_OU_2	RAS-560FSN6Q	5	ffffffffffffffffffffc0a88a69	2	774532	1
18	0be0ff12400429aef9a46c52871e00f5	1	2	2	A	3F	Room_A302	Hunter	18	RPI-28FSN6Q	28	AC_OU_2	RAS-560FSN6Q	5	ffffffffffffffffffffc0a88a69	2	774532	1
19	0be0ff12400429aef9a46c52871e00f5	1	2	3	A	3F	Room_A303	Hunter	19	RPI-28FSN6Q	28	AC_OU_2	RAS-560FSN6Q	5	ffffffffffffffffffffc0a88a69	2	774532	1
20	0be0ff12400429aef9a46c52871e00f5	1	2	4	A	3F	Room_A304	Stephanie	20	RPI-28FSN6Q	28	AC_OU_2	RAS-560FSN6Q	5	ffffffffffffffffffffc0a88a69	2	774532	1
21	0be0ff12400429aef9a46c52871e00f5	1	2	5	A	3F	Room_A305	Stephanie	21	RPI-28FSN6Q	28	AC_OU_2	RAS-560FSN6Q	5	ffffffffffffffffffffc0a88a69	2	774532	1
22	0be0ff12400429aef9a46c52871e00f5	1	2	6	A	3F	Room_A306	Brittany	22	RPI-28FSN6Q	28	AC_OU_2	RAS-560FSN6Q	5	ffffffffffffffffffffc0a88a69	2	774532	1
23	0be0ff12400429aef9a46c52871e00f5	1	2	7	A	3F	Room_A307	Brittany	23	RPI-28FSN6Q	28	AC_OU_2	RAS-560FSN6Q	5	ffffffffffffffffffffc0a88a69	2	774532	1
24	0be0ff12400429aef9a46c52871e00f5	1	2	8	A	3F	Room_A308	Jack	24	RPI-28FSN6Q	28	AC_OU_2	RAS-560FSN6Q	5	ffffffffffffffffffffc0a88a69	2	774532	1

Fig. 3.14 Configuration Information Example