



M-Concentrator

Installation Configuration and Maintenance Manual

Preamble

- This product is Schneider meter iEM 3150 and iEM 3350 meter readers.
- This product requires air conditioning and Hi-Dom gateway server (computer services software is installed, the computer needs local procurement) and with the use of Ethernet or the Internet.
- 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.

※One M-Concentrator can connect up to 247 shneider meters.

1.2 Name of meter adapter parts

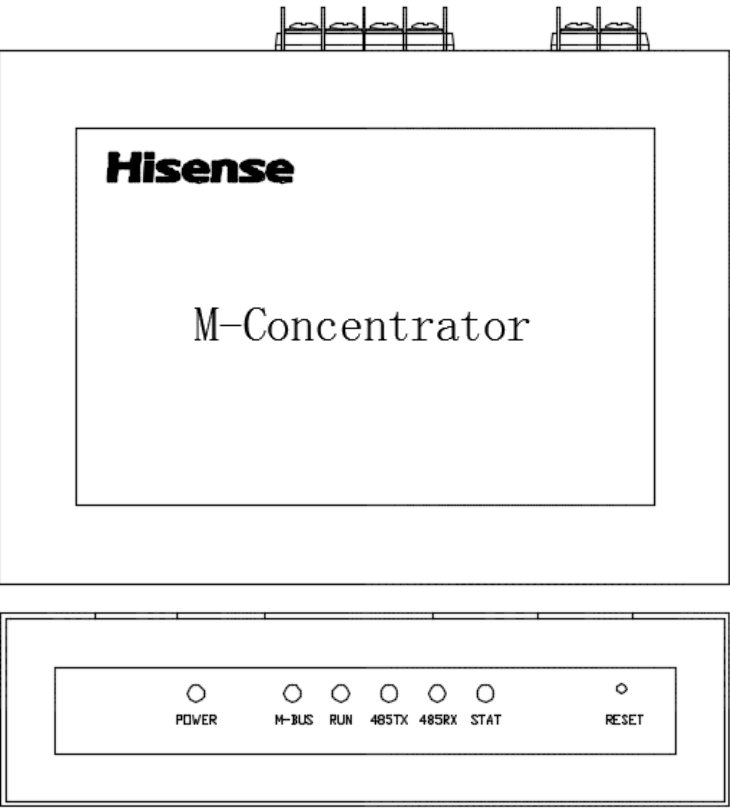


Figure 1.2 LED indicators

1.2.1 Description of LED indicators

POWER	Power display LED (red)	it is on when the unit is power-on
M-BUS	M-BUS signal communication display LED (yellow)	flashing when M-BUS signal is transmitted
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	

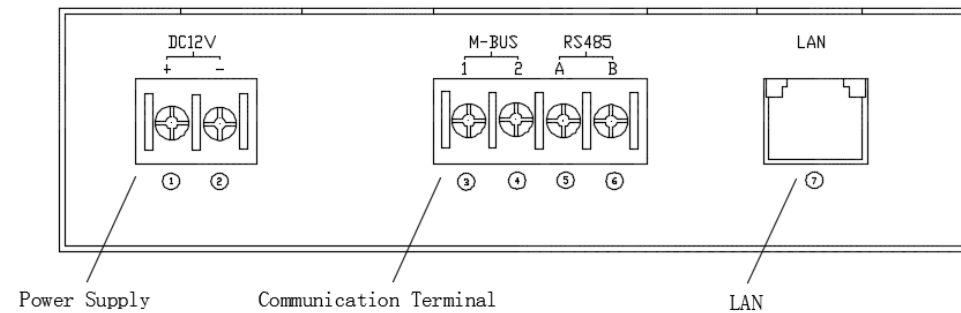


Figure 1.3 Terminal marking diagram

1.2.2 Terminal marking instruction

- ① : Power input(DC12V)-----Non-polarized
- ② : Power input(DC12V)-----Non-polarized
- ③ : M-BUS signal input -----Non-polarized
- ④ : M-BUS signal input -----Non-polarized
- ⑤ : RS485 A -----positive
- ⑥ : RS485 B -----negative
- ⑦ :LAN interface

※DC12V and DC5V power supply can not simultaneously access.

1.3 Specifications of meter adapter

Meter adapter specifications and LAN (Ethernet) communication specifications, see aircondition adapter related specifications.

Meter adapter RS485 communication specifications:

Table 1.1 RS485 communication specifications

Item	Specification
Communication objects	Meter (iEM3150 or iEM3350 supplied by Schneider Electric)
Communication wiring	Non-polarized 2 core wire
Communication mode	Half-duplex communication
Communication synchronous mode	asynchronous communication
Communication speed	19200 bps
Wiring distance	Total length less than 1000m
Number of meters connected	247

2. 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.

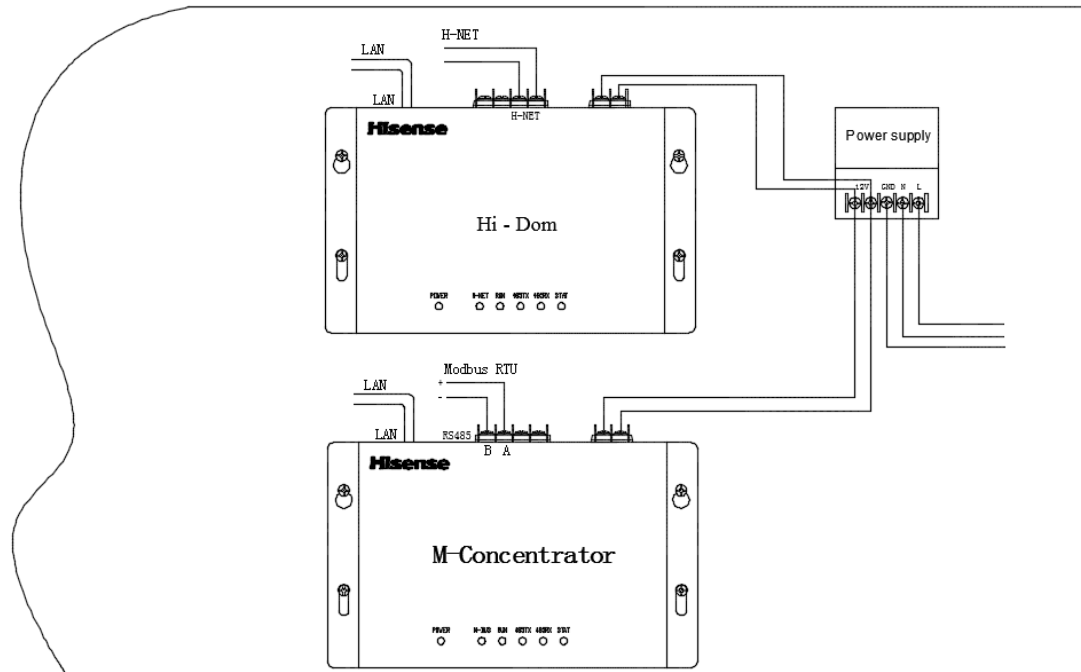


Figure 2.1 Installation diagram

2.2 Installation and wiring instructions

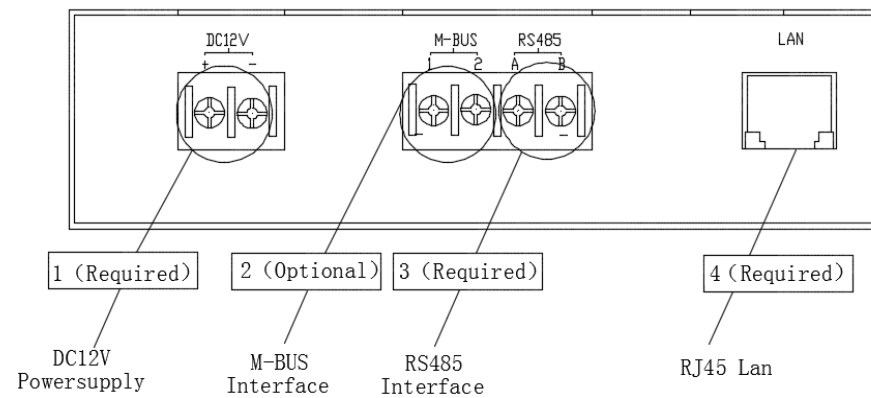


Figure 2.2 Wiring diagram of meter adapter

Figure 2.2 meter adapter wiring diagram wiring specifications, see Table 2.1 Wiring Specification of meter adapter.

Table 2.1 Wiring Specification of meter adapter					
No.	Wiring type	Voltage specification between lines	Usage of wiring	Distance of wiring	Cable Specification
1	RS485 communications wiring	DC 5V	For communication with meter supporting Modbus RTU of Schneider Electric, a must-have.	Within 1000m	0.75~1mm ²

Other wiring specifications, see air conditioning adapter wiring specifications.

3. System installation configuration and debugging

3.1 IP address setting

3.1.1 Meter reading adapter IP settings

Meter Concentrator wiring and IP settings, see wiring and IP settings of air-conditioning adapter.

The factory default IP of meter 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 meter adapter is re-set according to network configuration on the site.

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 3.1:

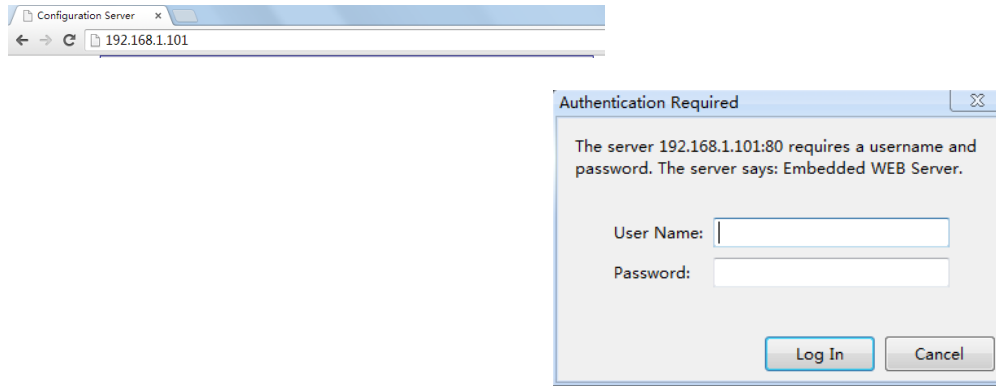


Figure 3.1 Setting and debugging login screen

Enter the user name: admin, with no password, click on the login, the interface appears after login as shown in Figure 3.2.

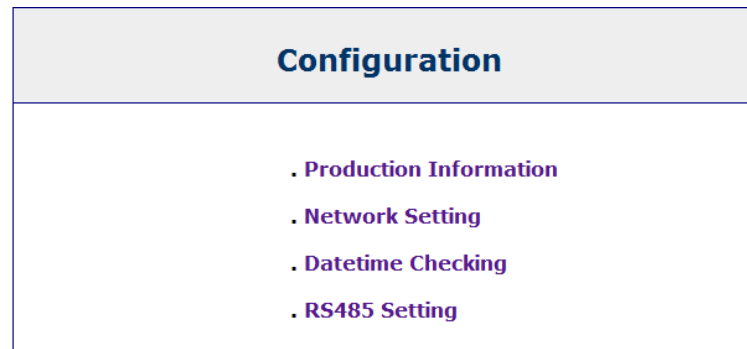


Figure3.2 Setting and debugging

Click <Network Settings> into the IP settings interface, Please refer to ip setting of air condition adapter.

Click <RS485 Settings> into RS485 interface as shown in Figure 3.3:

RS485 Configuration

Communicate By Modbus/RTU ☒ By Modbus/TCP ☐

Get AC status By inquiry ☒ By hardware informing ☐

Device address:

Baudrate: ▼

Data: ▼

Parity: ▼

Stop bit: ▼

Figure3.3 RS485 setting

※ Content shown in Fig. 3.3 must be consistent with the relevant setting content meter, the meter's RS485 port settings refer to meter manual of Schneider.

4 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.

□ (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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