



# Modbus Communication Board Manual

MY2025

# Modbus Communication Board Manual

Figure Number:8020001A7210 Material Code:T01ENG(DZ02)-1

## Connection instructions

### Installation of Modbus

1. According to the wiring diagram of Figure 1, the Modbus communication board and the switching power supply board are connected by shielded twisted pairs. Fig. 2 is a physical wiring diagram.
  2. Fig. 3 :The bolts of the red box are fixed lid, and the holes of the blue box are used to fix the whole sheet metal box to be erected.
- Note:
1. The Modbus components need to use two-core shielded twisted pairs, 0.75 mm<sup>2</sup> or more.
  2. The Modbus components should be installed indoors with an ambient temperature ranging from 20°C to 60 °C.
  3. The power supply voltage of a Modbus module is AC 220V.
  4. Because the cover plate is sheet metal, it can not be installed horizontally. It is necessary to erect the cover plate to prevent dew dropping on the PBA board.
  5. The longest connection between a Modbus board and a main board is 800m.
  6. J2 need to be short-clrited when many outdoor units are connected to a system.
  7. The slave unit address of modbus can be set through dial code SW11 and SW2, the detailed information is as follows:
  8. When J2, J3 and J4 jumper is shorted, it is equivalent to a 100 ohm resistor for ABE, K1K2E, and XYE.

| SW1 \ SW2 | 00                 | 01  | 10  | 11  |
|-----------|--------------------|-----|-----|-----|
| 0         | #0 (Not available) | #16 | #32 | #48 |
| 1         | #1                 | #17 | #33 | #49 |
| 2         | #2                 | #18 | #34 | #50 |
| 3         | #3                 | #19 | #35 | #51 |
| 4         | #4                 | #20 | #36 | #52 |
| 5         | #5                 | #21 | #37 | #53 |
| 6         | #6                 | #22 | #38 | #54 |
| 7         | #7                 | #23 | #39 | #55 |
| 8         | #8                 | #24 | #40 | #56 |
| 9         | #9                 | #25 | #41 | #57 |
| A         | #10                | #26 | #42 | #58 |
| B         | #11                | #27 | #43 | #59 |
| C         | #12                | #28 | #44 | #60 |
| D         | #13                | #29 | #45 | #61 |
| E         | #14                | #30 | #46 | #62 |
| F         | #15                | #31 | #47 | #63 |

|          |   |                          |
|----------|---|--------------------------|
| SW2 No.3 | 1 | only cooling unit        |
|          | 0 | cooling and heating unit |

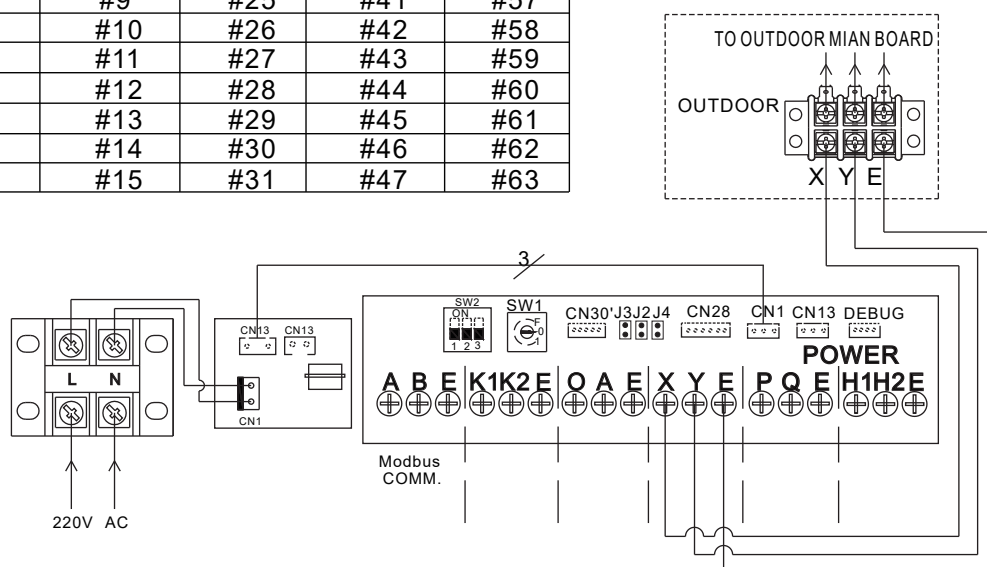


Fig. 1



Fig. 2



Fig. 3

### Fault Information

Note: The LED1 is the power lamp

| Fault                                      | Fault Display                            | Fault Cause                                                                                                                                                                |
|--------------------------------------------|------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Cannot find indoor conditioner             | LED1 flashes once every 8 seconds        | 1.Outdoor mian board problem;<br>2.Poor contact or missed connection of XYE terminal ;<br>3.No communication between indoor and outdoor conditioner.                       |
| Cannot find outdoor conditioner            | LED1 flashes twice every 8 seconds       | 1.Indoor mian board problem;<br>2.Modbus problem .                                                                                                                         |
| Cannot find indoor and outdoor conditioner | LED1 flashes three times every 8 seconds | 1.Outdoor mian board problem;<br>2.Poor contact or missed connection of XYE terminal ;<br>3.No communication between indoor and outdoor conditioner;<br>4.Modbus problem . |

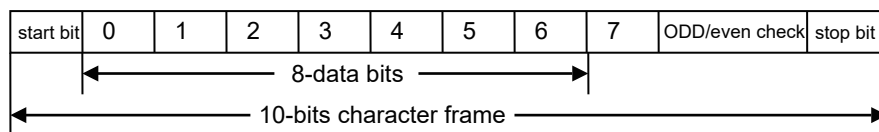
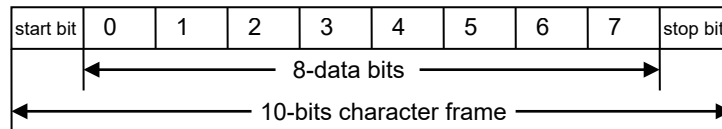
## Modbus potocol

### 1. Overview

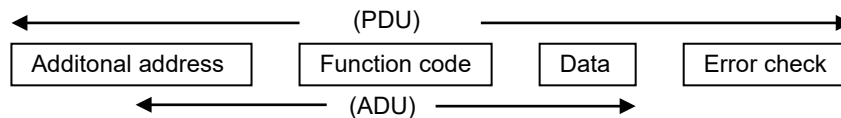
A.Use RTU type of ModBus protocol

B.Use R485 multi point bus master-slave structure, asynchronous half-duplex mode, data length 8 bits. Optional no parity bit, odd parity, and even parity (default no parity), baud rate is 9600bps.

### 1.2 Character structure



### 1.3 MODBUS Data Frames



### 1.4 MODBUS Data Encoding

For example: send data 0x1234, first send 0x12, then 0x34.

### 1.5 The red light:

ON: normal running

Blink one time in 8 seconds: no communication with indoor units

Blink two times in 8 seconds: no communication with outdoor units

Blink three times in 8 seconds: no communication with indoor and outdoor units

| indoor unit INPUT register                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                                        |                                          |                |                                                                                                 |               |              |               |             |                              |       |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------|------------------------------------------|----------------|-------------------------------------------------------------------------------------------------|---------------|--------------|---------------|-------------|------------------------------|-------|
| Input Register No                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                                        | description                              | unit           | variable                                                                                        | variable type | reading type | function code | instruction | reading address              |       |
| 0# indoor unit                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                                        |                                          |                |                                                                                                 |               |              |               |             |                              |       |
| 30001                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | word                                   | air return temperature                   | 0.1℃           | -32767~32767                                                                                    |               | int          | R             | 0x04        | temp.=variable*0.1℃          | 0     |
| 30002                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | word                                   | Evaporation pipe inlet temperature       | 0.1℃           | -32767~32767                                                                                    |               | int          | R             | 0x04        | temp.=variable*0.1℃          | 1     |
| 30003                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | word                                   | Evaporation pipe middle temperature      | 0.1℃           | -32767~32767                                                                                    |               | int          | R             | 0x04        | temp.=variable*0.1℃          | 2     |
| 30004                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | word                                   | indoor unit capacity                     | HP             | 0~255                                                                                           |               | int          | R             | 0x04        | capacity=variable*0.1HP      | 3     |
| 30005                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | word                                   | indoor unit capacity demand              | 5W             | 0-65535                                                                                         |               | un-int       | R             | 0x04        | capacity demand=variable*0.1 | 4     |
| 30006                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | bit15<br>bit14<br>bit13                | fan speed                                | N/A            | 0=OFF, 1=breeze (reserved), 2=low speed, 3=middle speed, 4=high speed, 5=super speed (reserved) | -----         |              | R             | 0x04        | actual fan speed             | 5     |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | bit12                                  | electrical heater                        | N/A            | 1=ON, 0=OFF                                                                                     | -----         |              | R             | 0x04        | electrical heater status     |       |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | bit11                                  | water pump                               | N/A            | 1=ON, 0=OFF                                                                                     | -----         |              | R             | 0x04        | water pump status            |       |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | bit10~bit 0                            | IDU EXV opening degree                   | N/A            | 0~2000                                                                                          | -----         |              | R             | 0x04        | EXV actual opening degree    |       |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | 30007                                  | word                                     | IDU error code | N/A                                                                                             | E0-EF         | -----        |               | R           | 0x04                         |       |
| 0=Normal; EF:other faults (reserved); EE:water level alarm error; ED:ODU fault protection (reserved); EC:fresh function error (reserved); EB:IPM module protection (reserved); EA:compressor over current (reserved); E9:communication fault between main board and display board (reserved); E8:Wind speed detecting out of control (reserved); E7:EEPROM fault (reserved); E6:Zero speed protection; E5:Outdoor unit failure error; E4:T2B temp. sensor failure; E3:T2A temp. sensor failure; E2:T1 temp. sensor failure; E1:communication fault (reserved); E0:Wrong phase sequence or lack phase |                                        |                                          |                |                                                                                                 |               |              |               |             |                              |       |
| 30008                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | bit15~12                               | main model(indoor unit type)             | N/A            | 0001: wall mounted                                                                              | -----         | R            | 0x04          | reserved    | 7                            |       |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                                        |                                          |                | 0010: floor-standing                                                                            |               |              |               |             |                              |       |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                                        |                                          |                | 0011: cassette                                                                                  |               |              |               |             |                              |       |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                                        |                                          |                | 0100: ducted                                                                                    |               |              |               |             |                              |       |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                                        |                                          |                | 0101: floor-ceiling                                                                             |               |              |               |             |                              |       |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                                        |                                          |                | 0110: reserved                                                                                  |               |              |               |             |                              |       |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                                        |                                          |                | 1001: auxiliary unit                                                                            |               |              |               |             |                              |       |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                                        |                                          |                | 1010: multi split                                                                               |               |              |               |             |                              |       |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                                        |                                          |                | 1100: inverter                                                                                  |               |              |               |             |                              |       |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                                        |                                          |                | 1110: digital scroll                                                                            |               |              |               |             |                              |       |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | bit11~10                               | auxiliary model (reserved)               | N/A            | 00, 01, 10, 11                                                                                  | -----         |              |               |             |                              |       |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | bit9~8                                 | design NO. (reserved)                    | N/A            | 00: new design<br>01~11 mean design order                                                       | -----         |              |               |             |                              |       |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | bit7                                   | extend temp. setting (reserved)          | ℃              | 0=17~30℃, 1=16~32℃                                                                              |               |              |               |             |                              |       |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | bit6                                   | processing of oxygen function (reserved) | N/A            | 0=no, 1=yes                                                                                     | -----         |              |               |             |                              |       |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | bit5                                   | fresh function (reserved)                | N/A            | 0=no, 1=yes                                                                                     | -----         |              |               |             |                              |       |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | bit4                                   | swing function (reserved)                | N/A            | 0=no, 1=yes                                                                                     | -----         |              |               |             |                              |       |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | bit3                                   | floor heating+FCU (reserved)             | N/A            | 0=no, 1=yes                                                                                     | -----         |              |               |             |                              |       |
| bit2                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | floor heating (reserved)               | N/A                                      | 0=no, 1=yes    | -----                                                                                           |               |              |               |             |                              |       |
| bit1                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | FCU two-way valve (reserved)           | N/A                                      | 0=OFF, 1=ON    | -----                                                                                           |               |              |               |             |                              |       |
| bit0                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | floor heating two-way valve (reserved) | N/A                                      | 0=OFF, 1=ON    | -----                                                                                           |               |              |               |             |                              |       |
| 30009                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | N/A                                    | N/A                                      | N/A            | N/A                                                                                             | N/A           | N/A          | N/A           | N/A         | 8                            |       |
| n# (0-63)input register                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                        |                                          |                |                                                                                                 |               |              |               |             |                              |       |
| 30001+n*9                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | word                                   | air return temperature                   | 0.1℃           | -32767~32767                                                                                    |               | int          | R             | 0x04        | temp.=variable*0.1℃          | n*9+0 |
| 30002+n*9                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | word                                   | Evaporation pipe inlet temperature       | 0.1℃           | -32767~32767                                                                                    |               | int          | R             | 0x04        | temp.=variable*0.1℃          | n*9+1 |
| 30003+n*9                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | word                                   | Evaporation pipe middle temperature      | 0.1℃           | -32767~32767                                                                                    |               | int          | R             | 0x04        | temp.=variable*0.1℃          | n*9+2 |
| 30004+n*9                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | word                                   | indoor unit capacity                     | HP             | 0~255                                                                                           |               | int          | R             | 0x04        | capacity=variable*0.1HP      | n*9+3 |
| 30005+n*9                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | word                                   | indoor unit capacity demand              | 5W             | 0-65535                                                                                         |               | un-int       | R             | 0x04        | capacity demand=variable*0.1 | n*9+4 |
| 30006+n*9                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | bit15<br>bit14<br>bit13                | fan speed                                | N/A            | 0=OFF, 1=super low speed, 2=low speed, 3=middle speed, 4=high speed, 5=super speed,             | -----         |              | R             | 0x04        | actual fan speed             | n*9+5 |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | bit12                                  | electrical heater                        | N/A            | 1=ON, 0=OFF                                                                                     | -----         |              | R             | 0x04        | electrical heater status     |       |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | bit11                                  | water pump                               | N/A            | 1=ON, 0=OFF                                                                                     | -----         |              | R             | 0x04        | water pump status            |       |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | bit10~bit 0                            | IDU EXV opening degree                   | N/A            | 0~2000                                                                                          | -----         |              | R             | 0x04        | EXV actual opening degree    |       |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | 30007+n*9                              | word                                     | IDU error code | N/A                                                                                             | E0-E15        | -----        |               | R           | 0x04                         |       |
| 0=Normal; EF:other faults (reserved); EE:water level alarm error; ED:ODU fault protection (reserved); EC:fresh function error (reserved); EB:IPM module protection (reserved); EA:compressor over current (reserved); E9:communication fault between main board and display board (reserved); E8:Wind speed detecting out of control (reserved); E7:EEPROM fault (reserved); E6:Zero speed protection; E5:Outdoor unit failure error; E4:T2B temp. sensor failure; E3:T2A temp. sensor failure; E2:T1 temp. sensor failure; E1:communication fault (reserved); E0:Wrong phase sequence or lack phase |                                        |                                          |                |                                                                                                 |               |              |               |             |                              |       |
| 30008+n*9                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | bit15~12                               | main model (indoor unit type)            | N/A            | 0001: wall mounted                                                                              | -----         | R            | 0x04          | reserved    | n*9+7                        |       |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                                        |                                          |                | 0010: floor-standing                                                                            |               |              |               |             |                              |       |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                                        |                                          |                | 0011: cassette                                                                                  |               |              |               |             |                              |       |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                                        |                                          |                | 0100: ducted                                                                                    |               |              |               |             |                              |       |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                                        |                                          |                | 0101: floor-ceiling                                                                             |               |              |               |             |                              |       |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                                        |                                          |                | 0110: reserved                                                                                  |               |              |               |             |                              |       |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                                        |                                          |                | 1001: uxiiliary unit                                                                            |               |              |               |             |                              |       |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                                        |                                          |                | 1010: multi split                                                                               |               |              |               |             |                              |       |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                                        |                                          |                | 1100: inverter                                                                                  |               |              |               |             |                              |       |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                                        |                                          |                | 1110: digital scroll                                                                            |               |              |               |             |                              |       |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | bit11~10                               | auxiliary model (reserved)               | N/A            | 00, 01, 10, 11                                                                                  | -----         |              |               |             |                              |       |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | bit9~8                                 | design NO. (reserved)                    | N/A            | 00: new design<br>01~11 mean design order                                                       | -----         |              |               |             |                              |       |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | bit7                                   | extend temp. setting (reserved)          | ℃              | 0=17~30℃, 1=16~32℃                                                                              |               |              |               |             |                              |       |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | bit6                                   | processing of oxygen function (reserved) | N/A            | 0=no, 1=yes                                                                                     | -----         |              |               |             |                              |       |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | bit5                                   | fresh function (reserved)                | N/A            | 0=no, 1=yes                                                                                     | -----         |              |               |             |                              |       |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | bit4                                   | swing function (reserved)                | N/A            | 0=no, 1=yes                                                                                     | -----         |              |               |             |                              |       |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | bit3                                   | floor heating+FCU (reserved)             | N/A            | 0=no, 1=yes                                                                                     | -----         |              |               |             |                              |       |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | bit2                                   | floor heating (reserved)                 | N/A            | 0=no, 1=yes                                                                                     | -----         |              |               |             |                              |       |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | bit1                                   | FCU two-way valve (reserved)             | N/A            | 0=OFF, 1=ON                                                                                     | -----         |              |               |             |                              |       |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | bit0                                   | floor heating two-way valve (reserved)   | N/A            | 0=OFF, 1=ON                                                                                     | -----         |              |               |             |                              |       |
| Note: 1. Only the indoor unit holding register can use the 0x10 function code<br>2. 0x10 function code, one instruction can only write 10 registers at most, otherwise the indoor unit may not respond in time<br>3. The recommended rate of command issuance is 1 per second<br>4. There must be mode, temperature and fan speed when starting up                                                                                                                                                                                                                                                   |                                        |                                          |                |                                                                                                 |               |              |               |             |                              |       |

| Indoor unit Holding Register           |                             |                              |                       |                                                                                                                                                                                                 |               |              |                                 |                                                          |                 |
|----------------------------------------|-----------------------------|------------------------------|-----------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------|--------------|---------------------------------|----------------------------------------------------------|-----------------|
| Holding Register No                    |                             | description                  | unit                  | variable                                                                                                                                                                                        | variable type | reading type | function code                   | instruction                                              | reading address |
| 0# indoor unit                         |                             |                              |                       |                                                                                                                                                                                                 |               |              |                                 |                                                          |                 |
| 40001                                  | bit15                       | ON/OFF                       | N/A                   | 1=OFF 2=ON                                                                                                                                                                                      | ----          | R/W          | 0x03,06                         | ON/OFF                                                   | 0               |
|                                        | bit14                       |                              |                       |                                                                                                                                                                                                 |               |              |                                 |                                                          |                 |
|                                        | bit13                       | setting mode                 | N/A                   | 1=cooling mode 2=dehumidification mode (cooling mode for some units) 4=Ventilation mode 8=heating mode 16=AUTO mode (cooling mode for some units) 9=floor heating 10= intelligent floor heating | ----          | R/W          | 0x03,06                         | setting mode                                             |                 |
|                                        | bit12                       |                              |                       |                                                                                                                                                                                                 |               |              |                                 |                                                          |                 |
|                                        | bit11                       |                              |                       |                                                                                                                                                                                                 |               |              |                                 |                                                          |                 |
|                                        | bit10                       |                              |                       |                                                                                                                                                                                                 |               |              |                                 |                                                          |                 |
|                                        | bit9                        | setting fan speed            | N/A                   | 1=low speed 2=middle speed 4=high speed 8=Auto speed (low speed for some units)                                                                                                                 | ----          | R/W          | 0x03,06                         | setting fan speed                                        |                 |
|                                        | bit8                        |                              |                       |                                                                                                                                                                                                 |               |              |                                 |                                                          |                 |
|                                        | bit7                        |                              |                       |                                                                                                                                                                                                 |               |              |                                 |                                                          |                 |
|                                        | bit6                        |                              |                       |                                                                                                                                                                                                 |               |              |                                 |                                                          |                 |
|                                        | bit5                        | setting temperature          | 1℃                    | 1-17(Other data does not change the original setting)                                                                                                                                           | ----          | R/W          | 0x03,06                         | actual setting temp.=variable+15                         |                 |
|                                        | bit4                        |                              |                       |                                                                                                                                                                                                 |               |              |                                 |                                                          |                 |
| bit3                                   |                             |                              |                       |                                                                                                                                                                                                 |               |              |                                 |                                                          |                 |
| bit2                                   |                             |                              |                       |                                                                                                                                                                                                 |               |              |                                 |                                                          |                 |
| bit1                                   |                             |                              |                       |                                                                                                                                                                                                 |               |              |                                 |                                                          |                 |
| bit0                                   |                             |                              |                       |                                                                                                                                                                                                 |               |              |                                 |                                                          |                 |
| n# indoor unit (0~63) holding register |                             |                              |                       |                                                                                                                                                                                                 |               |              |                                 |                                                          |                 |
| 40002                                  | bit15                       | shutdown lock (reserved)     | N/A                   | 1=lock, 0=unlock                                                                                                                                                                                | ----          | R/W          | 0x03,06                         | lock OFF status                                          | 1               |
|                                        | bit14                       | mode lock                    | N/A                   | 2=lock heating mode, 1=lock cooling mode, 0=unlock                                                                                                                                              | ----          | R/W          | 0x03,06                         | lock running mode                                        |                 |
|                                        | bit13                       |                              |                       |                                                                                                                                                                                                 |               |              |                                 |                                                          |                 |
|                                        | bit12                       | temperature lock (reserved)  | N/A                   | 3=lock 26℃, 2=lock 24℃, 1=lock 22℃, 0=unlock                                                                                                                                                    | ----          | R/W          | 0x03,06                         | lock setting temperature                                 |                 |
|                                        | bit11                       | remote lock                  | N/A                   | 1=lock, 0=unlock                                                                                                                                                                                | ----          | R/W          | 0x03,06                         | wired controller and remote controller can't control IDU |                 |
|                                        | bit10                       |                              |                       |                                                                                                                                                                                                 |               |              |                                 |                                                          |                 |
|                                        | bit9                        | N/A                          | N/A                   | N/A                                                                                                                                                                                             | ----          | R/W          | 0x03,06                         | R/W                                                      |                 |
|                                        | bit8                        | fresh air (reserved)         | N/A                   | 1=valid, 0=invalid                                                                                                                                                                              | ----          | R/W          | 0x03,06                         | fresh air valve setting status                           |                 |
|                                        | bit7                        | sleep ( reserved)            | N/A                   | 1=valid, 0=invalid                                                                                                                                                                              | ----          | R/W          | 0x03,06                         | sleep setting status                                     |                 |
|                                        | bit6                        | electrical heater (reserved) | N/A                   | 1=valid, 0=invalid                                                                                                                                                                              | ----          | R/W          | 0x03,06                         | electrical heater status                                 |                 |
|                                        | bit5                        | N/A                          | N/A                   | N/A                                                                                                                                                                                             | ----          | R/W          | 0x03,06                         | R/W                                                      |                 |
|                                        | bit4                        | N/A                          | N/A                   | N/A                                                                                                                                                                                             | ----          | R/W          | 0x03,06                         | R/W                                                      |                 |
| bit3                                   | Horizontal swing (reserved) | N/A                          | 1=ON, 0=OFF           | ----                                                                                                                                                                                            | R/W           | 0x03,06      | horizontal swing setting status |                                                          |                 |
| bit2~0                                 | Vertical swing              | N/A                          | 0~5=OFF, 6=Auto swing | ----                                                                                                                                                                                            | R/W           | 0x03,06      | vertical swing setting status   |                                                          |                 |
| n# indoor unit (0~63) holding register |                             |                              |                       |                                                                                                                                                                                                 |               |              |                                 |                                                          |                 |
| 40001+n*2                              | bit15                       | ON/OFF                       | N/A                   | 1=OFF 2=ON                                                                                                                                                                                      | ----          | R/W          | 0x03,06                         | ON/OFF                                                   | n*2+0           |
|                                        | bit14                       |                              |                       |                                                                                                                                                                                                 |               |              |                                 |                                                          |                 |
|                                        | bit13                       | setting mode                 | N/A                   | 1=cooling mode 2=dehumidification mode (cooling mode for some units) 4=Ventilation mode 8=heating mode 16=AUTO mode (cooling mode for some units) 9=floor heating 10= intelligent floor heating | ----          | R/W          | 0x03,06                         | setting mode                                             |                 |
|                                        | bit12                       |                              |                       |                                                                                                                                                                                                 |               |              |                                 |                                                          |                 |
|                                        | bit11                       |                              |                       |                                                                                                                                                                                                 |               |              |                                 |                                                          |                 |
|                                        | bit10                       |                              |                       |                                                                                                                                                                                                 |               |              |                                 |                                                          |                 |
|                                        | bit9                        | setting fan speed            | N/A                   | 1=low speed 2=middle speed 4=high speed 8=Auto speed (low speed for some units)                                                                                                                 | ----          | R/W          | 0x03,06                         | setting fan speed                                        |                 |
|                                        | bit8                        |                              |                       |                                                                                                                                                                                                 |               |              |                                 |                                                          |                 |
|                                        | bit7                        |                              |                       |                                                                                                                                                                                                 |               |              |                                 |                                                          |                 |
|                                        | bit6                        |                              |                       |                                                                                                                                                                                                 |               |              |                                 |                                                          |                 |
|                                        | bit5                        | setting temperature          | 1℃                    | 1-17(Other data does not change the original setting)                                                                                                                                           | ----          | R/W          | 0x03,06                         | actual setting temp.=variable+15                         |                 |
|                                        | bit4                        |                              |                       |                                                                                                                                                                                                 |               |              |                                 |                                                          |                 |
| bit3                                   |                             |                              |                       |                                                                                                                                                                                                 |               |              |                                 |                                                          |                 |
| bit2                                   |                             |                              |                       |                                                                                                                                                                                                 |               |              |                                 |                                                          |                 |
| bit1                                   |                             |                              |                       |                                                                                                                                                                                                 |               |              |                                 |                                                          |                 |
| bit0                                   |                             |                              |                       |                                                                                                                                                                                                 |               |              |                                 |                                                          |                 |
| 40002+n*2                              | bit15                       | shutdown lock (reserved)     | N/A                   | 1=lock, 0=unlock                                                                                                                                                                                | ----          | R/W          | 0x03,06                         | lock OFF status                                          | n*2+1           |
|                                        | bit14                       | mode lock                    | N/A                   | 2=lock heating mode, 1=lock cooling mode, 0=unlock                                                                                                                                              | ----          | R/W          | 0x03,06                         | lock running mode                                        |                 |
|                                        | bit13                       |                              |                       |                                                                                                                                                                                                 |               |              |                                 |                                                          |                 |
|                                        | bit12                       | temperature lock (reserved)  | N/A                   | 3=lock 26℃, 2=lock 24℃, 1=lock 22℃, 0=unlock                                                                                                                                                    | ----          | R/W          | 0x03,06                         | lock setting temperature                                 |                 |
|                                        | bit11                       | remote lock                  | N/A                   | 1=lock, 0=unlock                                                                                                                                                                                | ----          | R/W          | 0x03,06                         | wired controller and remote controller can't control IDU |                 |
|                                        | bit10                       |                              |                       |                                                                                                                                                                                                 |               |              |                                 |                                                          |                 |
|                                        | bit9                        | N/A                          | N/A                   | N/A                                                                                                                                                                                             | ----          | R/W          | 0x03,06                         | R/W                                                      |                 |
|                                        | bit8                        | fresh air (reserved)         | N/A                   | 1=valid, 0=invalid                                                                                                                                                                              | ----          | R/W          | 0x03,06                         | fresh air valve setting status                           |                 |
|                                        | bit7                        | sleep (reserved)             | N/A                   | 1=valid, 0=invalid                                                                                                                                                                              | ----          | R/W          | 0x03,06                         | sleep setting status                                     |                 |
|                                        | bit6                        | electrical heater (reserved) | N/A                   | 1=valid, 0=invalid                                                                                                                                                                              | ----          | R/W          | 0x03,06                         | electrical heater status                                 |                 |
|                                        | bit5                        | N/A                          | N/A                   | N/A                                                                                                                                                                                             | ----          | R/W          | 0x03,06                         | R/W                                                      |                 |
|                                        | bit4                        | N/A                          | N/A                   | N/A                                                                                                                                                                                             | ----          | R/W          | 0x03,06                         | R/W                                                      |                 |
|                                        | bit3                        | Horizontal swing (reserved)  | N/A                   | 1=ON, 0=OFF                                                                                                                                                                                     | ----          | R/W          | 0x03,06                         | horizontal swing setting status                          |                 |
|                                        | bit2~0                      | Vertical swing               | N/A                   | 0~5=OFF, 6=Auto swing                                                                                                                                                                           | ----          | R/W          | 0x03,06                         | vertical swing setting status                            |                 |
| System Holding Register                |                             |                              |                       |                                                                                                                                                                                                 |               |              |                                 |                                                          |                 |
| Holding Register No                    |                             | description                  | unit                  | variable                                                                                                                                                                                        | variable type | reading type | function code                   | instruction                                              | reading address |
| System setting                         |                             |                              |                       |                                                                                                                                                                                                 |               |              |                                 |                                                          |                 |
| 42001                                  | Word                        | Parity bit selection         | N/A                   | 0x0003=even parity, 0x0002=odd parity, 0x0000=no parity                                                                                                                                         | ----          | R/W          | 0x03,06                         | Odd-even parity setting                                  | 2000+A109:J178  |

| Group control Holding register |                                         |                                             |          |                                                                                                                                                   |               |              |               |                                                          |                                        |               |  |
|--------------------------------|-----------------------------------------|---------------------------------------------|----------|---------------------------------------------------------------------------------------------------------------------------------------------------|---------------|--------------|---------------|----------------------------------------------------------|----------------------------------------|---------------|--|
| Holding Register No            |                                         | description                                 | unit     | variable                                                                                                                                          | variable type | reading type | function code | instruction                                              | reading address                        |               |  |
| 43841                          | bit15                                   | ON/OFF                                      | N/A      | 1=OFF 2=ON                                                                                                                                        |               | R/W          | 0x03.06       | ON/OFF                                                   | 3840                                   |               |  |
|                                | bit14                                   |                                             |          |                                                                                                                                                   |               |              |               |                                                          |                                        |               |  |
|                                | bit13                                   |                                             |          |                                                                                                                                                   |               |              |               |                                                          |                                        |               |  |
|                                | bit12                                   | setting mode                                | N/A      | 1=cooling mode 2=dehumidification mode (cooling mode for some units) 4=Ventilation mode 8=heating mode 16=AUTO mode (cooling mode for some units) | -----         | R/W          | 0x03.06       | setting mode                                             |                                        |               |  |
|                                | bit11                                   |                                             |          |                                                                                                                                                   |               |              |               |                                                          |                                        |               |  |
|                                | bit10                                   |                                             |          |                                                                                                                                                   |               |              |               |                                                          |                                        |               |  |
|                                | bit9                                    |                                             |          |                                                                                                                                                   |               |              |               |                                                          |                                        |               |  |
|                                | bit8                                    | setting fan speed                           | N/A      | 1=low speed 2=middle speed 4=high speed 8=Auto speed (low speed for some units)                                                                   | -----         | R/W          | 0x03.06       | setting fan speed                                        |                                        |               |  |
|                                | bit7                                    |                                             |          |                                                                                                                                                   |               |              |               |                                                          |                                        |               |  |
|                                | bit6                                    |                                             |          |                                                                                                                                                   |               |              |               |                                                          |                                        |               |  |
|                                | bit5                                    |                                             |          |                                                                                                                                                   |               |              |               |                                                          |                                        |               |  |
|                                | bit4                                    | setting temperature                         | 1℃       | 1-17(Other data does not change the original setting)                                                                                             | -----         | R/W          | 0x03.06       | actual setting temp.=variable+15                         |                                        |               |  |
| bit3                           |                                         |                                             |          |                                                                                                                                                   |               |              |               |                                                          |                                        |               |  |
| bit2                           |                                         |                                             |          |                                                                                                                                                   |               |              |               |                                                          |                                        |               |  |
| bit1                           |                                         |                                             |          |                                                                                                                                                   |               |              |               |                                                          |                                        |               |  |
| bit0                           |                                         |                                             |          |                                                                                                                                                   |               |              |               |                                                          |                                        |               |  |
| 43842                          | bit15                                   | shutdown lock(reserved)                     | N/A      | 1=lock, 0=unlock                                                                                                                                  | -----         | R/W          | 0x03.06       | lock OFF status                                          | 3841                                   |               |  |
|                                | bit14                                   | mode lock                                   | N/A      | 2=lock heating mode, 1=lock cooling mode, 0=unlock                                                                                                | -----         | R/W          | 0x03.06       | lock running mode                                        |                                        |               |  |
|                                | bit13                                   | temperature lock(reserved)                  | N/A      | 3=lock 26℃, 2=lock 24℃, 1=lock 22℃, 0=unlock                                                                                                      | -----         | R/W          | 0x03.06       | lock setting temperature                                 |                                        |               |  |
|                                | bit12                                   |                                             |          |                                                                                                                                                   |               |              |               |                                                          |                                        |               |  |
|                                | bit11                                   | remote lock                                 | N/A      | 1=lock, 0=unlock                                                                                                                                  | -----         | R/W          | 0x03.06       | wired controller and remote controller can't control IDU |                                        |               |  |
|                                | bit9                                    | N/A                                         | N/A      | N/A                                                                                                                                               | -----         | R/W          | 0x03.06       | R/W                                                      |                                        |               |  |
|                                | bit8                                    | fresh air(reserved)                         | N/A      | 1=valid, 0=invalid                                                                                                                                | -----         | R/W          | 0x03.06       | fresh air valve setting status                           |                                        |               |  |
|                                | bit7                                    | sleep(reserved)                             | N/A      | 1=valid, 0=invalid                                                                                                                                | -----         | R/W          | 0x03.06       | sleep setting status                                     |                                        |               |  |
|                                | bit6                                    | electrical heater(reserved)                 | N/A      | 1=valid, 0=invalid                                                                                                                                | -----         | R/W          | 0x03.06       | electrical heater status                                 |                                        |               |  |
|                                | bit5                                    | N/A                                         | N/A      | N/A                                                                                                                                               | -----         | R/W          | 0x03.06       | R/W                                                      |                                        |               |  |
|                                | bit4                                    | N/A                                         | N/A      | N/A                                                                                                                                               | -----         | R/W          | 0x03.06       | R/W                                                      |                                        |               |  |
|                                | bit3                                    | Horizontal swing(reserved)                  | N/A      | 1=ON, 0=OFF                                                                                                                                       | -----         | R/W          | 0x03.06       | horizontal swing setting status                          |                                        |               |  |
|                                | bit2~0                                  | Vertical swing                              | N/A      | 0~5=OFF, 6=Auto swing                                                                                                                             | -----         | R/W          | 0x03.06       | vertical swing setting status                            |                                        |               |  |
|                                |                                         |                                             |          |                                                                                                                                                   |               |              |               |                                                          |                                        |               |  |
| ODU Input register             |                                         |                                             |          |                                                                                                                                                   |               |              |               |                                                          |                                        |               |  |
| 0# ODU                         |                                         |                                             |          |                                                                                                                                                   |               |              |               |                                                          |                                        |               |  |
| Input Register No              |                                         | description                                 | unit     | variable                                                                                                                                          | variable type | reading type | function code | instruction                                              | reading address                        |               |  |
| 32049                          | word                                    | reserved                                    | N/A      | -----                                                                                                                                             | -----         | R            | 0x04          | reserved                                                 | 2048                                   |               |  |
| 32050                          | word                                    | reserved                                    | N/A      | -----                                                                                                                                             | -----         | R            | 0x04          | reserved                                                 | 2049                                   |               |  |
| 32051                          | High-beyt                               | Protection status (hexadecimal, 0 or F0-FF) | N/A      |                                                                                                                                                   | un-int        | R            | 0x04          | F0-FF-->P0-PF                                            | 2050                                   |               |  |
|                                | Low-beyt                                | error code (hexadecimal, 0 or E0-EF)        |          |                                                                                                                                                   |               |              |               | E0-E9 stand actual error code, EA->H0,EB->H1             |                                        |               |  |
|                                |                                         |                                             |          |                                                                                                                                                   |               |              |               | EC->H2,ED->H3                                            |                                        |               |  |
|                                |                                         |                                             |          |                                                                                                                                                   |               |              |               |                                                          |                                        | EE->H7,EF->EF |  |
| E7                             | reserved                                |                                             | EF       | other fault                                                                                                                                       |               |              |               | P7 Fix compressor 1 current protection                   | PF Other protection                    |               |  |
| E6                             | T3 temp. sensor failure                 |                                             | H7       | decrease of indoor units                                                                                                                          |               |              |               | P6 IPM module protection                                 | PE Oil balance                         |               |  |
| E5                             | reserved                                |                                             | H3       | Outdoor unit quantity increasing fault (master ODU)                                                                                               |               |              |               | P5 Heat exchanger high temperature (T3) protection       | PD Oil return                          |               |  |
| E4                             | T4 temp. sensor failure                 |                                             | H2       | Outdoor unit quantity decreasing fault (master ODU)                                                                                               |               |              |               | P4 High discharge temperature protection                 | PC reserved                            |               |  |
| E3                             | reserved                                |                                             | H1       | communication fault between 0537 and 0547(main pcb fault)                                                                                         |               |              |               | P3 Inverter overcurrent protection                       | PB reserved                            |               |  |
| E2                             | communication fault between ODU and IDU |                                             | H0       | communication fault between DSP(compressor inverter board) and 0547(main pcb)                                                                     |               |              |               | P2 Low pressure of discharge protection                  | PA Defrosting protection               |               |  |
| E1                             | Wrong phase sequence or lack phase      |                                             | E9       | voltage fault                                                                                                                                     |               |              |               | P1 High pressure of discharge protection                 | P9 DC fan module protection            |               |  |
| E0                             | communication fault between ODUs        |                                             | E8       | ODU address fault                                                                                                                                 |               |              |               | P0 High temperature of Inverter compressor top           | P8 Fix compressor 2 current protection |               |  |
| 32055                          | word                                    | High pressure                               | 0.001MPa | 0-65535                                                                                                                                           | un-int        | R            | 0x04          |                                                          | 2054                                   |               |  |
| 32061                          | word                                    | Ambient temp.                               | 0.1℃     | -32767~32767                                                                                                                                      | int           | R            | 0x04          | temp.=variable*0.1℃                                      | 2060                                   |               |  |
| 32065                          | word                                    | Discharge temp. of compressor A1            | 0.1℃     | -32767~32767                                                                                                                                      | int           | R            | 0x04          | temp.=variable*0.1℃                                      | 2064                                   |               |  |
| 32066                          | word                                    | Discharge temp. of compressor B1 (Reserved) | 0.1℃     | -32767~32767                                                                                                                                      | int           | R            | 0x04          | temp.=variable*0.1℃                                      | 2065                                   |               |  |
| 32067                          | word                                    | Discharge temp. of compressor A2            | 0.1℃     | -32767~32767                                                                                                                                      | -----         | R            | 0x04          | temp.=variable*0.1℃                                      | 2066                                   |               |  |
| 32073                          | word                                    | EXV1 opening degree                         | 1 pulse  | 0-2000                                                                                                                                            | un-int        | R            | 0x04          | EXV actual opening degree                                | 2072                                   |               |  |
| 32074                          | word                                    | EXV2 opening degree                         | 1 pulse  | 0-2000                                                                                                                                            | un-int        | R            | 0x04          | EXV actual opening degree                                | 2073                                   |               |  |
| 32079                          | word                                    | fan speed                                   |          | 0-255                                                                                                                                             | un-int        | R            | 0x04          |                                                          | 2078                                   |               |  |
| 32080                          | word                                    | Compressor 1 rotate speed                   | 0.1RPS   | 0-65535                                                                                                                                           | un-int        | R            | 0x04          | Rotate speed = variable*0.1                              | 2079                                   |               |  |
| 32084                          | word                                    | Compressor 2 rotate speed                   | 0.1RPS   | 0-65535                                                                                                                                           | un-int        | R            | 0x04          | Rotate speed = variable*0.1                              | 2083                                   |               |  |
| 32088                          | bit15                                   | ODU distinguish code                        | N/A      | 15(fixed)                                                                                                                                         | -----         | R            | 0x04          |                                                          | 2087                                   |               |  |
|                                | bit14                                   |                                             |          |                                                                                                                                                   |               |              |               |                                                          |                                        |               |  |
|                                | bit13                                   |                                             |          |                                                                                                                                                   |               |              |               |                                                          |                                        |               |  |
|                                | bit12                                   |                                             |          |                                                                                                                                                   |               |              |               |                                                          |                                        |               |  |
|                                | bit11                                   | Power supply                                | N/A      | 0=single phase, 1=three-phase                                                                                                                     | -----         |              | 0x04          |                                                          |                                        |               |  |
|                                | bit10                                   | TYPE                                        | N/A      | 0=ON/OFF, 1=Inverter, 2=Digital, 3=Chiller                                                                                                        | -----         |              | 0x04          |                                                          |                                        |               |  |
|                                | bit9                                    |                                             |          |                                                                                                                                                   |               |              |               |                                                          |                                        |               |  |
|                                | bit8                                    |                                             |          |                                                                                                                                                   |               |              |               |                                                          |                                        |               |  |
| bit7~bit0                      | Reserved                                |                                             |          |                                                                                                                                                   |               |              |               |                                                          |                                        |               |  |
| 32089                          | bit15~bit8                              | Reserved                                    |          |                                                                                                                                                   |               | R            |               |                                                          | 2088                                   |               |  |
|                                | bit7~bit0                               | ODU capacity                                | HP       | 0-255                                                                                                                                             | -----         |              |               |                                                          |                                        |               |  |

| n# (0-3) ODU Input register                |                |                                                |                                                                                  |                                                               |                                                    |              |               |                                                                                   |                 |  |
|--------------------------------------------|----------------|------------------------------------------------|----------------------------------------------------------------------------------|---------------------------------------------------------------|----------------------------------------------------|--------------|---------------|-----------------------------------------------------------------------------------|-----------------|--|
| 32049 +n*49                                | word           | Reserved                                       | N/A                                                                              | N/A                                                           | ----                                               | R            | 0x04          | Reserved                                                                          | n*49+2048       |  |
| 32050 +n*49                                | word           | Reserved                                       | N/A                                                                              | N/A                                                           | ----                                               | R            | 0x04          | Reserved                                                                          | n*49+2049       |  |
| 32051 +n*49                                | High-beyt      | Protection status<br>(hexadecimal, 0 or F0-FF) | N/A                                                                              |                                                               | un-int                                             | R            | 0X04          | F0-FF-->P0-PF                                                                     | n*49+2050       |  |
|                                            |                | error code<br>(hexadecimal, 0 or E0-EF)        | N/A                                                                              |                                                               |                                                    |              |               | E0-E9 stand actual error code,<br>EA->H0,EB->H1<br>EC->H2,ED->H3<br>EE->H7,EF->EF |                 |  |
|                                            | Low-beyt       |                                                |                                                                                  |                                                               |                                                    |              |               |                                                                                   |                 |  |
|                                            |                |                                                |                                                                                  |                                                               |                                                    |              |               |                                                                                   |                 |  |
| E7 reserved                                |                |                                                | EF other fault                                                                   |                                                               | P7 Fix compressor 1 current protection             |              |               | PF Other protection                                                               |                 |  |
| E6 T3 temp. sensor failure                 |                |                                                | H7 decrease of indoor units                                                      |                                                               | P6 IPM module protection                           |              |               | PE Oil balance                                                                    |                 |  |
| E5 reserved                                |                |                                                | H3 Outdoor unit quantity increasing fault (master ODU)                           |                                                               | P5 Heat exchanger high temperature (T3) protection |              |               | PD Oil return                                                                     |                 |  |
| E4 T4 temp. sensor failure                 |                |                                                | H2 Outdoor unit quantity decreasing fault (master ODU)                           |                                                               | P4 High discharge temperature protection           |              |               | PC reserved                                                                       |                 |  |
| E3 reserved                                |                |                                                | H1 communication fault between 0537 and 0547(main pcb fault)                     |                                                               | P3 Inverter overcurrent protection                 |              |               | PB reserved                                                                       |                 |  |
| E2 communication fault between ODU and IDU |                |                                                | H0 communication fault between DSP(compressor inverter board) and 0547(main pcb) |                                                               | P2 Low pressure of discharge protection            |              |               | PA Defrosting protection                                                          |                 |  |
| E1 Wrong phase sequence or lack phase      |                |                                                | E9 voltage fault                                                                 |                                                               | P1 High pressure of discharge protection           |              |               | P9 DC fan module protection                                                       |                 |  |
| E0 communication fault between ODUs        |                |                                                | E8 ODU address fault                                                             |                                                               | P0 High temperature of Inverter compressor top     |              |               | P8 Fix compressor 2 current protection                                            |                 |  |
| 32055 +n*49                                | word           | High pressure                                  | 0.001MPa                                                                         | 0-65535                                                       | un-int                                             | R            | 0x04          |                                                                                   | n*49+2054       |  |
| 32061 +n*49                                | word           | Ambient temp.                                  | 0.1°C                                                                            | -32767~32767                                                  | int                                                | R            | 0x04          | temp.=variable*0.1°C                                                              | n*49+2060       |  |
| 32065 +n*49                                | word           | Discharge temp. of compressor A1               | 0.1°C                                                                            | -32767~32767                                                  | int                                                | R            | 0x04          | temp.=variable*0.1°C                                                              | n*49+2064       |  |
| 32066 +n*49                                | word           | Discharge temp. of compressor B1 (Reserved)    | 0.1°C                                                                            | -32767~32767                                                  | int                                                | R            | 0x04          | temp.=variable*0.1°C                                                              | n*49+2065       |  |
| 32067 +n*49                                | word           | Discharge temp. of compressor A2               | 0.1°C                                                                            | -32767~32767                                                  | ----                                               | R            | 0x04          | temp.=variable*0.1°C                                                              | n*49+2066       |  |
| 32073 +n*49                                | word           | EXV1 opening degree                            | 1 pulse                                                                          | 0-2000                                                        | un-int                                             | R            | 0x04          | EXV actual opening degree                                                         | n*49+2072       |  |
| 32074 +n*49                                | word           | EXV2 opening degree                            | 1 pulse                                                                          | 0-2000                                                        | un-int                                             | R            | 0x04          | EXV actual opening degree                                                         | n*49+2073       |  |
| 32079 +n*49                                | word           | fan speed                                      |                                                                                  | 0-255                                                         | un-int                                             | R            | 0x04          |                                                                                   | n*49+2078       |  |
| 32080 +n*49                                | word           | Compressor 1 rotate speed                      | 0.1RPS                                                                           | 0-65535                                                       | un-int                                             | R            | 0x04          | Rotate speed = variable*0.1                                                       | n*49+2079       |  |
| 32084 +n*49                                | word           | Compressor 2 rotate speed                      | 0.1RPS                                                                           | 0-65535                                                       | un-int                                             | R            | 0x04          | Rotate speed = variable*0.1                                                       | n*49+2083       |  |
| 32088 +n*49                                | bit15          | ODU distinguish code                           | N/A                                                                              | 15(fixed)                                                     | ----                                               | R            | 0x04          |                                                                                   | n*49+2087       |  |
|                                            | bit14          |                                                |                                                                                  |                                                               |                                                    |              |               |                                                                                   |                 |  |
|                                            | bit13          |                                                |                                                                                  |                                                               |                                                    |              |               |                                                                                   |                 |  |
|                                            | bit12          |                                                |                                                                                  |                                                               |                                                    |              |               |                                                                                   |                 |  |
|                                            | bit11          | Power supply                                   | N/A                                                                              | 0=single phase, 1=three-phase                                 | ----                                               |              | 0x04          |                                                                                   |                 |  |
|                                            | bit10          | TYPE                                           | N/A                                                                              | 0=ON/OFF, 1=Inverter, 2=Digital, 3=Chiller                    | ----                                               |              | 0x04          |                                                                                   |                 |  |
| bit9                                       |                |                                                |                                                                                  |                                                               |                                                    |              |               |                                                                                   |                 |  |
| bit8                                       |                |                                                |                                                                                  |                                                               |                                                    |              |               |                                                                                   |                 |  |
| 32089 +n*49                                | bit7~bit0      | Reserved                                       |                                                                                  |                                                               |                                                    |              |               |                                                                                   |                 |  |
|                                            | bit15~bit8     | Reserved                                       |                                                                                  |                                                               | ----                                               | R            | 0x04          |                                                                                   | n*49+2088       |  |
|                                            | bit7~bit0      | ODU capacity                                   | HP                                                                               | 0-255                                                         | ----                                               |              | 0x04          |                                                                                   |                 |  |
| SYSTEM Input register                      |                |                                                |                                                                                  |                                                               |                                                    |              |               |                                                                                   |                 |  |
| Input Register No                          |                | description                                    | unit                                                                             | variable                                                      | variable type                                      | reading type | function code | instruction                                                                       | reading address |  |
| 32561                                      | bit15<br>bit14 | System running mode                            | N/A                                                                              | 0x00=OFF, 0x01=Cooling mode, 0x02=Heating mode, 0x03= OFFline | ----                                               | R            | 0x04          | Outdoor system current status                                                     | 2560            |  |
| 32573                                      | bit15~0        | 15# ~0# IDU online status                      | N/A                                                                              | 0=off-line,1=online                                           | ----                                               | R            | 0x04          | The IDU online status is represented by bit.                                      | 2572            |  |
| 32574                                      | bit15~0        | 31# ~16# IDU online status                     | N/A                                                                              | 0=off-line,1=online                                           | ----                                               | R            | 0x04          |                                                                                   | 2573            |  |
| 32575                                      | bit15~0        | 47# ~32# IDU online status                     | N/A                                                                              | 0=off-line,1=online                                           | ----                                               | R            | 0x04          |                                                                                   | 2574            |  |
| 32576                                      | bit15~0        | 63# ~48# IDU online status                     | N/A                                                                              | 0=off-line,1=online                                           | ----                                               | R            | 0x04          |                                                                                   | 2575            |  |