MODBUS address table:

Parameter No.	Content	Range	Default	Record Position
00	Useless			Main control
01	Useless			By-wire
02	Bypass opening temperature X	5-30	19	Main control
03	Bypass opening temperature range Y	2-15	3	Main contro
04	Defrosting interval	15-99	30	Main control
05	Defrosting enter temperature	-9-5	-1	Main control
06	Defrost duration time	2-20	10	Main control
07	CO2 sensor	26-250		Main control
08	ModBus address	1-		Main control
09	ERV ON/OFF	0-OFF 1-ON		Main control
10	Supply fan speed	Fan speed： 0-stop 5-high speed 3-middle speed 2-low speed		Main control
11	Exhaust fan speed	Fan speed： 0-stop 5-high speed 3-middle speed 2-low speed		Main control
12	Room temperature	observed value （-40）		Main control
13	Outdoor temperature	observed value （-40）		Main control
14	Exhaust air temperature	observed value（-40）		Main control
15	Defrosting temperature	observed value（-40）		Main control
16	External ON/OFF signal	query value		Main control
17	CO2 ON/OFF signal	query value		Main control
18	Fire alarm signal/bypass/defrosting signal	query value: B0 – 1-fire alarm ON B1- 1-bypass on B2- 1-bypass off B3- 1- defrosting		Main control
19				Main control
20	Error symbol	query value: B0-OA temperature error B1-EEPROM error B2-RA temperature error B3-Fr temperature error (auto defrosting) B4-SA temperture error		Main control

21	ERV model match/selection	For DC fan units only		Main control
22	Defrost mode selection			Main control
23	Fan speed control	0-2 speeds control 1-3 speeds control 2-10 speeds control (DC units)		Main control
24	Multifunction Setting	0- reseved 1- PCB running time clear		Main control
25	Filter alarm timmer	0- 45 days 1- 60 days 2- 90 days 3- 180 days		Main control
768	CO2 value		R	Main control
769	Fan running time	Unit: 0.1h, range 0-65535	R	Main control

MODBUS protocol:

1. 1#ERV power off:

Send：01 06 00 09 00 00 59 C8

PCB feedback：01 06 00 09 00 00 59 C8

Record:

01 06 00 09 00 00 59 C8

01 06 00 09 00 00 59 C8

2. 1#ERV power on:

Send：01 06 00 09 00 01 98 08

PCB feedback: 01 06 00 09 00 01 98 08

Record:

01 06 00 09 00 01 98 08

01 06 00 09 00 01 98 08

3. To check ERV On/Off status (Parameter No.9):

Send: 01 03 00 09 00 01 54 08

PCB feedback: 01 03 02 00 01 79 84

Record:

01 03 00 09 00 01 54 08

01 03 02 00 01 79 84

Status: 1

4. Get 4 words from Parameter No.9:

Send: 01 03 00 09 00 04 94 0B

PCB feedback: 01 03 02 00 01 79 84

Record:

01 03 00 09 00 04 94 0B

01 03 08 00 01 00 03 00 05 00 41 11 26

5. To check room temperature (Parameter No.12):

Send: 01 03 00 09 00 04 94 0B

PCB feedback:

Record:

01 03 00 0C 00 01 44 09

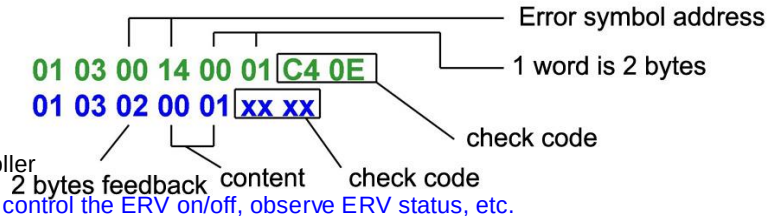
01 03 02 00 41 78 74

Remark：suppose PCB feedback is 41 (hexadecimal)，then in decimalism is 65, room temperature is 25 degree (65-40)

6. Error symbol:

01 03 00 14 00 01 C4 0E

01 03 02 00 01 xx xx



Modbus protocol and LCD controller

With Modbus protocol, BMS can control the ERV on/off, observe ERV status, etc.

When PCB get the instruction from BMS, LCD controller will update its status at the same time, during this period LCD controller doesn't accept any manual operation, after communication finished, user can control the ERV again with LCD controller.