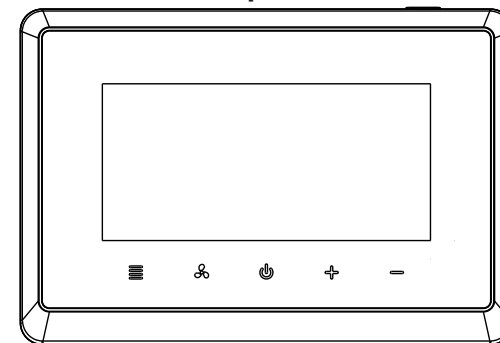


MODBUS RS485  
communication protocol

Thermostat universal  
Interface protocols



### CP2-485 communication protocol

|  |    |
|--|----|
| Basic description .....                | 02 |
| Read the thermostat frame format ..... | 04 |
| Set the thermostat frame format .....  | 26 |

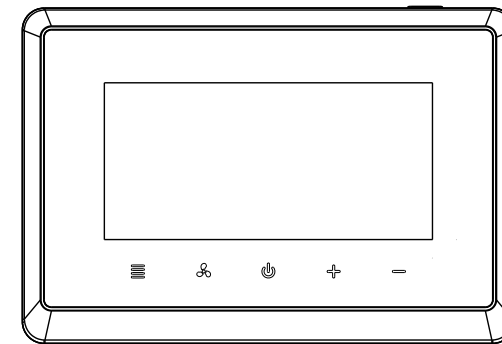
### CP1-485 communication protocol

|  |    |
|--|----|
| Basic description .....                | 32 |
| Read the thermostat frame format ..... | 34 |
| Set the thermostat frame format .....  | 50 |

### FAN-485 communication protocol

|  |    |
|--|----|
| Basic description .....                | 54 |
| Read the thermostat frame format ..... | 56 |
| Set the thermostat frame format .....  | 70 |

### communication protocol



This protocol is in standard MODBUS as a reference, mainly use for communication between thermostat and upper computer.

## CP2-485 communication protocol Two stage DX system

### 1.Basic description

| Number | Parameter          | Protocol provision                                |
|--------|--------------------|---|
| 1      | Operating mode     | RS-485, master-slave, thermostat is the slave     |
| 2      | Physical interface | A(+), B(-) two-wire system                        |
| 3      | Baud rate          | 9600  |
| 4      | Byte format        | 10 format ( 1 start bit+8 data bits +1 stop bit ) |
| 5      | Transmission mode  | RTU format ( consult MODBUS standard )            |
| 6      | Thermostat address | 1-254   |

|    |                       |   |
|----|-----------------------|---|
| 7  | Command code          | 3, 6(3—read thermostat, 6—set thermostat) |
| 8  | CRC check code        | CRC-16(consult MODBUS standard)           |
| 9  | CRC verification mode | CRC-16(consult MODBUS standard)           |
| 10 | Data frame interval   | Greater than 4 bytes                      |

## 2. Read the thermostat frame format

Command frame (give by upper computer): Read the thermostat state

| Byte 1             | Byte 2               | Byte 3                             | Byte 4                            | Byte 5                              | Byte 6                             | Byte 7  | Byte 8   |
|--------------------|----------------------|------------------------------------|-----------------------------------|-------------------------------------|------------------------------------|---------|----------|
| Thermostat address | 03<br>(command code) | 00<br>(Start address)<br>High byte | 00<br>(Start address)<br>Low byte | 00<br>(register count)<br>High byte | 11<br>(register count)<br>Low byte | CRC low | CRC high |

Response frame (give by thermostat)

| Byte 1             | Byte 2               | Byte 3              | Byte 4...Byte 37                         | Byte 38 | Byte 39  |
|--------------------|----------------------|---------------------|--|---------|----------|
| Thermostat address | 03<br>(command code) | 22<br>Bytes<br>(34) | thermostat state value<br>(17 registers) | CRC low | CRC high |

| Byte   | Value | Instruction   | Register address                          |
|--------|-------|---|---|
| Byte 4 | 00    | Thermostat state is high byte: general is 00  | 0(ON/OFF)<br>( Read/Write )               |
| Byte 5 | 00/01 | Thermostat state is low byte: 00 –OFF, 01—ON  |   |
| Byte 6 | 00    | Thermostat mode high byte: general is 00  | 1(Fan mode)<br>( Read/Write )             |
| Byte 7 | 00~03 | Thermostat mode low byte: three speed fan<br>0 – Auto speed , 01 – High speed , 02 – Med speed<br>03 – Low speed ; one speed fan :00 –ON , 01 –Auto |   |
| Byte 8 | XX    | Setting temperature high byte   | 2(Setting temperature)<br>( Read/Write )  |
| Byte 9 | YY    | Setting temperature low byte  |   |
| Byte10 | 00    | Compressor 1 working state high byte  | 3(Compressor 1 working state)<br>( Read ) |
| Byte11 | 00~02 | Compressor 1 working state low byte :0 –OFF;<br>1 –ON;2-protecting  |   |
| Byte12 | 00    | Compressor 2 working state high byte  | 4(Compressor 2 working state)<br>( Read ) |

|        |       |  |   |
|--------|-------|--|---|
| Byte13 | 00~02 | Compressor 2 working state low byte :0 –OFF; 1 –ON;2-protecting  | 4(Compressor 2 working state)<br>( Read )                 |
| Byte14 | 00    | Fan working state high byte  | 5(Fan working state)<br>( Read )                          |
| Byte15 | 00~02 | Fan working state low byte: three speed fan<br>0 – OFF , 1 – High speed , 2 – Med speed ,<br>3 – Low speed ; one speed fan :0 –OFF , 1 –ON |   |
| Byte16 | 00    | Room card state high byte  | 6(Room card state)<br>( Read )                            |
| Byte17 | 0~1   | Room card state low byte 00–someone;01–nobody<br>(the default is 1 for no room card, can not modify)                                       |   |
| Byte18 | 00    | Compressor 1 start dead band high byte   | 7(Compressor 1 start dead band)<br>( Read/Write )         |
| Byte19 | XX    | Compressor 1 start dead band low byte 1°C~5°C  |   |
| Byte20 | 00    | Compressor 1 stop running dead band high byte  | 8(Compressor 1 stop running dead band )<br>( Read/Write ) |
| Byte21 | XX    | Compressor 1 stop running dead band low byte 1°C~5°C   |   |

|        |    |   |  |
|--------|----|---|--|
| Byte22 | 00 | Compressor 1 delay time high byte   | 9(Compressor 1 delay time)<br>( Read/Write )               |
| Byte23 | XX | Compressor 1 delay time low byte 0~5min                                     |  |
| Byte24 | 00 | Compressor 2 start dead band high byte                                      | 10(Compressor 2 start dead band)<br>( Read/Write )         |
| Byte25 | XX | Compressor 2 start dead band low byte 1°C~5°C                               |  |
| Byte26 | 00 | Compressor 2 stop running dead band high byte                               | 11(Compressor 1 stop running dead band )<br>( Read/Write ) |
| Byte27 | XX | Compressor 2 stop running dead band low byte 1°C~5°C                        |  |
| Byte28 | 00 | Compressor 2 delay time high byte   | 12(Compressor 2 delay time)<br>( Read/Write )              |
| Byte29 | XX | Compressor 2 delay time low byte 0~5min                                     |  |
| Byte30 | 00 | After activate compressor 1, delay to activate compressor 2 high byte       | 13(Compressor 2 delay time)<br>( Read/Write )              |
| Byte31 | XX | After activate compressor 1, delay to activate compressor 2 low byte 1~5min |  |

|        |    |  |  |
|--------|----|--|--|
| Byte32 | XX | The current temperature of the thermostat high byte        | 14(Room temperature)<br>( Read )         |
| Byte33 | YY | The current temperature of the thermostat low byte         |  |
| Byte34 | XX | Thermostat working mode high byte                          | 15(Working mode)<br>( Read/Write )       |
| Byte35 | YY | Thermostat working mode low byte 00~cooling;<br>01~heating |  |
| Byte36 | XX | Address for thermostat RS485 high byte                     | 16(Address for RS485 )<br>( Read/Write ) |
| Byte37 | YY | Address for thermostat RS485 low byte<br>address:1-254     |  |

#### Command frame 1: Read the thermostat ON/OFF state

| Byte 1             | Byte 2               | Byte 3                             | Byte 4                             | Byte 5                              | Byte 6                             | Byte 7  | Byte 8   |
|--------------------|----------------------|------------------------------------|------------------------------------|-------------------------------------|------------------------------------|---------|----------|
| Thermostat address | 03<br>(command code) | 00<br>(Start address)<br>High byte | 00<br>( Start address)<br>Low byte | 00<br>(register count)<br>High byte | 01<br>(register count)<br>Low byte | CRC low | CRC high |

#### Response frame ( give by thermostat )

| Byte 1             | Byte 2               | Byte 3      | Byte 4                            | Byte 5                          | Byte 6  | Byte 7   |
|--------------------|----------------------|-------------|-----------------------------------|---------------------------------|---------|----------|
| Thermostat address | 03<br>(command code) | 02<br>Bytes | 00<br>(ON/OFF state)<br>high byte | XX<br>(ON/OFF state)<br>lowbyte | CRC low | CRC high |

ON/OFF state value: 0000 – Thermostat OFF, 0001 – Thermostat ON

Command frame 2: Read the thermostat fan state

| Byte 1             | Byte 2               | Byte 3                             | Byte 4                             | Byte 5                              | Byte 6                             | Byte 7  | Byte 8   |
|--------------------|----------------------|------------------------------------|------------------------------------|-------------------------------------|------------------------------------|---------|----------|
| Thermostat address | 03<br>(command code) | 00<br>(Start address)<br>High byte | 01<br>( Start address)<br>Low byte | 00<br>(register count)<br>High byte | 01<br>(register count)<br>Low byte | CRC low | CRC high |

Response frame (give by thermostat)

| Byte 1             | Byte 2               | Byte 3      | Byte 4                          | Byte 5                        | Byte 6  | Byte 7   |
|--------------------|----------------------|-------------|---------------------------------|-------------------------------|---------|----------|
| Thermostat address | 03<br>(command code) | 02<br>Bytes | 00<br>(Mode state)<br>high byte | XX<br>(Mode state)<br>lowbyte | CRC low | CRC high |

The Fan working mode : three speed fan:0000 – AUTO, 0001 – High ,  
0002 – Medium, 0003 – Low  
Single speed fan: 0000 – ON,0001 – AUTO

Command frame 3: Read the thermostat setting temperature

| Byte 1             | Byte 2               | Byte 3                             | Byte 4                             | Byte 5                              | Byte 6                             | Byte 7  | Byte 8   |
|--------------------|----------------------|------------------------------------|------------------------------------|-------------------------------------|------------------------------------|---------|----------|
| Thermostat address | 03<br>(command code) | 00<br>(Start address)<br>High byte | 02<br>( Start address)<br>Low byte | 00<br>(register count)<br>High byte | 01<br>(register count)<br>Low byte | CRC low | CRC high |

Response frame (give by thermostat)

| Byte 1             | Byte 2               | Byte 3      | Byte 4                                   | Byte 5                                  | Byte 6  | Byte 7   |
|--------------------|----------------------|-------------|--|---|---------|----------|
| Thermostat address | 03<br>(command code) | 02<br>Bytes | XX<br>(setting temperature)<br>high byte | YY<br>(setting temperature)<br>low byte | CRC low | CRC high |

High byte XX= 01, low byte YY= 2c  
0x012c= 300 (Setting temperature only can be the multiple of 5,  
the range is 50~350) setting temperature is 30.0℃

Command frame 4: Read the compressor 1 working state

| Byte 1             | Byte 2               | Byte 3                             | Byte 4                             | Byte 5                              | Byte 6                             | Byte 7  | Byte 8   |
|--------------------|----------------------|------------------------------------|------------------------------------|-------------------------------------|------------------------------------|---------|----------|
| Thermostat address | 03<br>(command code) | 00<br>(Start address)<br>High byte | 03<br>( Start address)<br>Low byte | 00<br>(register count)<br>High byte | 01<br>(register count)<br>Low byte | CRC low | CRC high |

Response frame (give by thermostat)

| Byte 1             | Byte 2               | Byte 3      | Byte 4  | Byte 5   | Byte 6  | Byte 7   |
|--------------------|----------------------|-------------|---|--|---------|----------|
| Thermostat address | 03<br>(command code) | 02<br>Bytes | XX<br>(compressor 1 working state)<br>high byte | YY<br>(compressor 1 working state)<br>low byte | CRC low | CRC high |

compressor 1 working state : 0000 – OFF,0001 – Running, 0002 – protecting

Command frame 5: Read the compressor 2 working state

| Byte 1             | Byte 2               | Byte 3                             | Byte 4                             | Byte 5                              | Byte 6                             | Byte 7  | Byte 8   |
|--------------------|----------------------|------------------------------------|------------------------------------|-------------------------------------|------------------------------------|---------|----------|
| Thermostat address | 03<br>(command code) | 00<br>(Start address)<br>High byte | 04<br>( Start address)<br>Low byte | 00<br>(register count)<br>High byte | 01<br>(register count)<br>Low byte | CRC low | CRC high |

Response frame (give by thermostat)

| Byte 1             | Byte 2               | Byte 3      | Byte 4  | Byte 5   | Byte 6  | Byte 7   |
|--------------------|----------------------|-------------|---|--|---------|----------|
| Thermostat address | 03<br>(command code) | 02<br>Bytes | XX<br>(compressor 2 working state)<br>high byte | YY<br>(compressor 2 working state)<br>low byte | CRC low | CRC high |

compressor 2 working state : 0000 – OFF,0001 – Running, 0002 – protecting



Command frame 6: Read the Fan working state

| Byte 1             | Byte 2               | Byte 3                             | Byte 4                             | Byte 5                              | Byte 6                             | Byte 7  | Byte 8   |
|--------------------|----------------------|------------------------------------|------------------------------------|-------------------------------------|------------------------------------|---------|----------|
| Thermostat address | 03<br>(command code) | 00<br>(Start address)<br>High byte | 05<br>( Start address)<br>Low byte | 00<br>(register count)<br>High byte | 01<br>(register count)<br>Low byte | CRC low | CRC high |

Response frame (give by thermostat)

| Byte 1             | Byte 2               | Byte 3      | Byte 4                                     | Byte 5                                    | Byte 6  | Byte 7   |
|--------------------|----------------------|-------------|--|---|---------|----------|
| Thermostat address | 03<br>(command code) | 02<br>Bytes | XX<br>(The fan working state)<br>high byte | YY<br>(The fan working state)<br>low byte | CRC low | CRC high |

The fan working state :three speed fan:0000 – OFF, 0001 – High speed ,  
0002 – Med speed, 0003 – Low speed  
Single speed fan: 0000 – OFF,0001 – ON

Command frame 7: Read the room card state

| Byte 1             | Byte 2               | Byte 3                             | Byte 4                             | Byte 5                              | Byte 6                             | Byte 7  | Byte 8   |
|--------------------|----------------------|------------------------------------|------------------------------------|-------------------------------------|------------------------------------|---------|----------|
| Thermostat address | 03<br>(command code) | 00<br>(Start address)<br>High byte | 06<br>( Start address)<br>Low byte | 00<br>(register count)<br>High byte | 01<br>(register count)<br>Low byte | CRC low | CRC high |

Response frame (give by thermostat)

| Byte 1             | Byte 2               | Byte 3      | Byte 4                               | Byte 5                              | Byte 6  | Byte 7   |
|--------------------|----------------------|-------------|--------------------------------------|-------------------------------------|---------|----------|
| Thermostat address | 03<br>(command code) | 02<br>Bytes | 00<br>(Room card state)<br>high byte | XX<br>(Room card state)<br>low byte | CRC low | CRC high |

0000 – Nobody,0001 – Someone

Command frame 8: Read the compressor 1 starting conditions

| Byte 1             | Byte 2               | Byte 3                             | Byte 4                             | Byte 5                              | Byte 6                             | Byte 7  | Byte 8   |
|--------------------|----------------------|------------------------------------|------------------------------------|-------------------------------------|------------------------------------|---------|----------|
| Thermostat address | 03<br>(command code) | 00<br>(Start address)<br>High byte | 07<br>( Start address)<br>Low byte | 00<br>(register count)<br>High byte | 01<br>(register count)<br>Low byte | CRC low | CRC high |

Response frame (give by thermostat)

| Byte 1             | Byte 2               | Byte 3      | Byte 4  | Byte 5   | Byte 6  | Byte 7   |
|--------------------|----------------------|-------------|---|--|---------|----------|
| Thermostat address | 03<br>(command code) | 02<br>Bytes | 00<br>(Compress 1 start dead band)<br>high byte | XX<br>(Compress 1 start dead band)<br>low byte | CRC low | CRC high |

0001°C,0002°C, 0003°C, 0004°C, 0005°C

Command frame 9: Read the compressor 1 stop conditions

| Byte 1             | Byte 2               | Byte 3                             | Byte 4                             | Byte 5                              | Byte 6                             | Byte 7  | Byte 8   |
|--------------------|----------------------|------------------------------------|------------------------------------|-------------------------------------|------------------------------------|---------|----------|
| Thermostat address | 03<br>(command code) | 00<br>(Start address)<br>High byte | 08<br>( Start address)<br>Low byte | 00<br>(register count)<br>High byte | 01<br>(register count)<br>Low byte | CRC low | CRC high |

Response frame (give by thermostat)

| Byte 1             | Byte 2               | Byte 3      | Byte 4   | Byte 5  | Byte 6  | Byte 7   |
|--------------------|----------------------|-------------|--|---|---------|----------|
| Thermostat address | 03<br>(command code) | 02<br>Bytes | 00<br>(Compress 1 stop dead band)<br>high byte | XX<br>(Compress 1 stop dead band)<br>low byte | CRC low | CRC high |

0001°C,0002°C, 0003°C, 0004°C, 0005°C

Command frame 10: Read the compressor 1 restart delay

| Byte 1             | Byte 2               | Byte 3                             | Byte 4                             | Byte 5                              | Byte 6                             | Byte 7  | Byte 8   |
|--------------------|----------------------|------------------------------------|------------------------------------|-------------------------------------|------------------------------------|---------|----------|
| Thermostat address | 03<br>(command code) | 00<br>(Start address)<br>High byte | 09<br>( Start address)<br>Low byte | 00<br>(register count)<br>High byte | 01<br>(register count)<br>Low byte | CRC low | CRC high |

Response frame (give by thermostat)

| Byte 1             | Byte 2               | Byte 3      | Byte 4  | Byte 5                                       | Byte 6  | Byte 7   |
|--------------------|----------------------|-------------|---|--|---------|----------|
| Thermostat address | 03<br>(command code) | 02<br>Bytes | 00<br>(Compress 1 restart delay)<br>high byte | XX<br>(Compress 1 restart delay)<br>low byte | CRC low | CRC high |

0000~0005min

Command frame 11: Read the compressor 2 starting conditions

| Byte 1             | Byte 2               | Byte 3                             | Byte 4                             | Byte 5                              | Byte 6                             | Byte 7  | Byte 8   |
|--------------------|----------------------|------------------------------------|------------------------------------|-------------------------------------|------------------------------------|---------|----------|
| Thermostat address | 03<br>(command code) | 00<br>(Start address)<br>High byte | 0a<br>( Start address)<br>Low byte | 00<br>(register count)<br>High byte | 01<br>(register count)<br>Low byte | CRC low | CRC high |

Response frame (give by thermostat)

| Byte 1             | Byte 2               | Byte 3      | Byte 4  | Byte 5   | Byte 6  | Byte 7   |
|--------------------|----------------------|-------------|---|--|---------|----------|
| Thermostat address | 03<br>(command code) | 02<br>Bytes | 00<br>(Compress 2 start dead band)<br>high byte | XX<br>(Compress 2 start dead band)<br>low byte | CRC low | CRC high |

0001°C,0002°C, 0003°C, 0004°C, 0005°C

Command frame 12: Read the compressor 2 stop conditions

| Byte 1             | Byte 2               | Byte 3                             | Byte 4                             | Byte 5                              | Byte 6                             | Byte 7  | Byte 8   |
|--------------------|----------------------|------------------------------------|------------------------------------|-------------------------------------|------------------------------------|---------|----------|
| Thermostat address | 03<br>(command code) | 00<br>(Start address)<br>High byte | 0b<br>( Start address)<br>Low byte | 00<br>(register count)<br>High byte | 01<br>(register count)<br>Low byte | CRC low | CRC high |

Response frame (give by thermostat)

| Byte 1             | Byte 2               | Byte 3      | Byte 4   | Byte 5  | Byte 6  | Byte 7   |
|--------------------|----------------------|-------------|--|---|---------|----------|
| Thermostat address | 03<br>(command code) | 02<br>Bytes | 00<br>(Compress 2 stop dead band)<br>high byte | XX<br>(Compress 2 stop dead band)<br>low byte | CRC low | CRC high |

0001°C,0002°C, 0003°C, 0004°C, 0005°C

Command frame 13: Read the compressor 2 starting conditions

| Byte 1             | Byte 2               | Byte 3                             | Byte 4                             | Byte 5                              | Byte 6                             | Byte 7  | Byte 8   |
|--------------------|----------------------|------------------------------------|------------------------------------|-------------------------------------|------------------------------------|---------|----------|
| Thermostat address | 03<br>(command code) | 00<br>(Start address)<br>High byte | 0c<br>( Start address)<br>Low byte | 00<br>(register count)<br>High byte | 01<br>(register count)<br>Low byte | CRC low | CRC high |

Response frame (give by thermostat)

| Byte 1             | Byte 2               | Byte 3      | Byte 4                                   | Byte 5                                  | Byte 6  | Byte 7   |
|--------------------|----------------------|-------------|--|---|---------|----------|
| Thermostat address | 03<br>(command code) | 02<br>Bytes | 00<br>(Compress 2 restart )<br>high byte | XX<br>(Compress 2 restart )<br>low byte | CRC low | CRC high |

0000~0005min

Command frame 14: Read the compressor 2 start delay after active compressor 1

| Byte 1             | Byte 2               | Byte 3                             | Byte 4                             | Byte 5                              | Byte 6                             | Byte 7  | Byte 8   |
|--------------------|----------------------|------------------------------------|------------------------------------|-------------------------------------|------------------------------------|---------|----------|
| Thermostat address | 03<br>(command code) | 00<br>(Start address)<br>High byte | 0d<br>( Start address)<br>Low byte | 00<br>(register count)<br>High byte | 01<br>(register count)<br>Low byte | CRC low | CRC high |

Response frame (give by thermostat)

| Byte 1             | Byte 2               | Byte 3      | Byte 4                                      | Byte 5                                     | Byte 6  | Byte 7   |
|--------------------|----------------------|-------------|---|--|---------|----------|
| Thermostat address | 03<br>(command code) | 02<br>Bytes | 00<br>(Compress 2 start delay)<br>high byte | XX<br>(Compress 2 start delay)<br>low byte | CRC low | CRC high |

0001~0005min

Command frame 15: Read the current temperature of the thermostat

| Byte 1             | Byte 2               | Byte 3                             | Byte 4                             | Byte 5                              | Byte 6                             | Byte 7  | Byte 8   |
|--------------------|----------------------|------------------------------------|------------------------------------|-------------------------------------|------------------------------------|---------|----------|
| Thermostat address | 03<br>(command code) | 00<br>(Start address)<br>High byte | 0e<br>( Start address)<br>Low byte | 00<br>(register count)<br>High byte | 01<br>(register count)<br>Low byte | CRC low | CRC high |

Response frame (give by thermostat)

| Byte 1             | Byte 2               | Byte 3      | Byte 4  | Byte 5                                       | Byte 6  | Byte 7   |
|--------------------|----------------------|-------------|---|--|---------|----------|
| Thermostat address | 03<br>(command code) | 02<br>Bytes | XX<br>(The current temperature )<br>high byte | YY<br>(The current temperature )<br>low byte | CRC low | CRC high |

High byte XX= 01, low byte YY= 2c  
0x012c= 300 the room temperature is 30.0℃

Command frame 16: Read the thermostat working mode

| Byte 1             | Byte 2               | Byte 3                             | Byte 4                             | Byte 5                              | Byte 6                             | Byte 7  | Byte 8   |
|--------------------|----------------------|------------------------------------|------------------------------------|-------------------------------------|------------------------------------|---------|----------|
| Thermostat address | 03<br>(command code) | 00<br>(Start address)<br>High byte | 0f<br>( Start address)<br>Low byte | 00<br>(register count)<br>High byte | 01<br>(register count)<br>Low byte | CRC low | CRC high |

Response frame (give by thermostat)

| Byte 1             | Byte 2               | Byte 3      | Byte 4                            | Byte 5                           | Byte 6  | Byte 7   |
|--------------------|----------------------|-------------|-----------------------------------|----------------------------------|---------|----------|
| Thermostat address | 03<br>(command code) | 02<br>Bytes | XX<br>(Working mode)<br>high byte | YY<br>(Working mode)<br>low byte | CRC low | CRC high |

00:cooling    01:heating

Command frame 17: Read the address of RS485

| Byte 1             | Byte 2               | Byte 3                             | Byte 4                             | Byte 5                              | Byte 6                             | Byte 7  | Byte 8   |
|--------------------|----------------------|------------------------------------|------------------------------------|-------------------------------------|------------------------------------|---------|----------|
| Thermostat address | 03<br>(command code) | 00<br>(Start address)<br>High byte | 10<br>( Start address)<br>Low byte | 00<br>(register count)<br>High byte | 01<br>(register count)<br>Low byte | CRC low | CRC high |

Response frame (give by thermostat)

| Byte 1             | Byte 2               | Byte 3      | Byte 4                                 | Byte 5                                | Byte 6  | Byte 7   |
|--------------------|----------------------|-------------|--|---------------------------------------|---------|----------|
| Thermostat address | 03<br>(command code) | 02<br>Bytes | XX<br>(address of RS485 )<br>high byte | YY<br>(address of RS485 )<br>low byte | CRC low | CRC high |

Low byte    address:1-254

### 3.Set the thermostat frame format

Command frame 1 (give by upper computer) :Set the thermostat ON/OFF

| Byte 1             | Byte 2               | Byte 3                             | Byte 4                             | Byte 5                             | Byte 6                            | Byte 7  | Byte 8   |
|--------------------|----------------------|------------------------------------|------------------------------------|------------------------------------|-----------------------------------|---------|----------|
| Thermostat address | 06<br>(command code) | 00<br>(Start address)<br>High byte | 00<br>( Start address)<br>Low byte | 00<br>(Setting value)<br>High byte | XX<br>(Setting value)<br>Low byte | CRC low | CRC high |

Setting value: 0000 – thermostat OFF, 0001 – thermostat ON;  
 Response frame: correctly operate, the instruction will return to the same;  
 Operation is not correct does not response, the upper computer will manage;  
 The rule about subsequent response of setup command is same with this.

Command frame 2 (give by upper computer) : Set the fan mode

| Byte 1             | Byte 2               | Byte 3                             | Byte 4                             | Byte 5                             | Byte 6                            | Byte 7  | Byte 8   |
|--------------------|----------------------|------------------------------------|------------------------------------|------------------------------------|-----------------------------------|---------|----------|
| Thermostat address | 06<br>(command code) | 00<br>(Start address)<br>High byte | 01<br>( Start address)<br>Low byte | 00<br>(Setting value)<br>High byte | XX<br>(Setting value)<br>Low byte | CRC low | CRC high |

The fan working state :three speed fan:0000 – AUTO, 0001 – High speed ,  
 0002 – Med speed, 0003 – Low speed  
 Single speed fan: 0000 – ON,0001 – AUTO

Command frame 3 (give by upper computer) : Set the setting temperature

| Byte 1             | Byte 2               | Byte 3                             | Byte 4                             | Byte 5                                   | Byte 6                                  | Byte 7  | Byte 8   |
|--------------------|----------------------|------------------------------------|------------------------------------|--|---|---------|----------|
| Thermostat address | 06<br>(command code) | 00<br>(Start address)<br>High byte | 02<br>( Start address)<br>Low byte | XX<br>(Setting temperature)<br>High byte | YY<br>(Setting temperature)<br>Low byte | CRC low | CRC high |

High byte XX= 01 Low byte YY= 2c  
 0x012c= 300 (setting temperature only can be the multiple of 5,  
 the range is 50~350) setting temperature is 30.0°C.

Command frame 8: Set the start conditions for compressor 1

| Byte 1             | Byte 2               | Byte 3                             | Byte 4                             | Byte 5   | Byte 6  | Byte 7  | Byte 8   |
|--------------------|----------------------|------------------------------------|------------------------------------|--|---|---------|----------|
| Thermostat address | 06<br>(command code) | 00<br>(Start address)<br>High byte | 07<br>( Start address)<br>Low byte | 00<br>(compressor 1 start dead band )<br>High byte | XX<br>(compressor 1 start dead band )<br>Low byte | CRC low | CRC high |

start conditions for compressor 1 :0001°C,0002°C, 0003°C, 0004°C, 0005°C

Command frame 9: Set the stop conditions for compressor 1

| Byte 1             | Byte 2               | Byte 3                             | Byte 4                             | Byte 5   | Byte 6  | Byte 7  | Byte 8   |
|--------------------|----------------------|------------------------------------|------------------------------------|--|---|---------|----------|
| Thermostat address | 06<br>(command code) | 00<br>(Start address)<br>High byte | 08<br>( Start address)<br>Low byte | 00<br>(compressor 1 stop dead band)<br>High byte | XX<br>(compressor 1 stop dead band)<br>Low byte | CRC low | CRC high |

Stop conditions for compressor 1 :0001°C,0002°C, 0003°C, 0004°C, 0005°C

Command frame 10: Set the restart delay for compressor 1

| Byte 1             | Byte 2               | Byte 3                             | Byte 4                             | Byte 5                                       | Byte 6                                      | Byte 7  | Byte 8   |
|--------------------|----------------------|------------------------------------|------------------------------------|--|---|---------|----------|
| Thermostat address | 06<br>(command code) | 00<br>(Start address)<br>High byte | 09<br>( Start address)<br>Low byte | 00<br>(compress1 restart delay)<br>High byte | XX<br>(compress1 restart delay)<br>Low byte | CRC low | CRC high |

Setting value: 0000~0005 min

Command frame 11: Set the start conditions for compressor 2

| Byte 1             | Byte 2               | Byte 3                             | Byte 4                             | Byte 5  | Byte 6  | Byte 7  | Byte 8   |
|--------------------|----------------------|------------------------------------|------------------------------------|---|---|---------|----------|
| Thermostat address | 06<br>(command code) | 00<br>(Start address)<br>High byte | 0a<br>( Start address)<br>Low byte | 00<br>(compressor 2 start dead band)<br>High byte | XX<br>(compressor 2 start dead band)<br>Lowbyte | CRC low | CRC high |

Start conditions for compressor 2 :0001°C,0002°C, 0003°C, 0004°C, 0005°C

Command frame 12: Set the stop conditions for compressor 2

| Byte 1             | Byte 2               | Byte 3                             | Byte 4                             | Byte 5   | Byte 6  | Byte 7  | Byte 8   |
|--------------------|----------------------|------------------------------------|------------------------------------|--|---|---------|----------|
| Thermostat address | 06<br>(command code) | 00<br>(Start address)<br>High byte | 0b<br>( Start address)<br>Low byte | 00<br>(compress 2 stop dead band)<br>High byte | XX<br>(compress 2 stop dead band)<br>Low byte | CRC low | CRC high |

Stop conditions for compressor 2 :0001°C,0002°C, 0003°C, 0004°C, 0005°C



Command frame 13 :Set the restart delay for compressor 2

| Byte 1             | Byte 2               | Byte 3                             | Byte 4                             | Byte 5  | Byte 6                                       | Byte 7  | Byte 8   |
|--------------------|----------------------|------------------------------------|------------------------------------|---|--|---------|----------|
| Thermostat address | 06<br>(command code) | 00<br>(Start address)<br>High byte | 0c<br>( Start address)<br>Low byte | 00<br>(compress 2 restart delay)<br>High byte | XX<br>(compress 2 restart delay)<br>Low byte | CRC low | CRC high |

Setting value: 0000~0005 min

Command frame 14: Set the start delay for compressor 2 after activate compressor 1

| Byte 1             | Byte 2               | Byte 3                             | Byte 4                             | Byte 5                                      | Byte 6                                     | Byte 7  | Byte 8   |
|--------------------|----------------------|------------------------------------|------------------------------------|---|--|---------|----------|
| Thermostat address | 06<br>(command code) | 00<br>(Start address)<br>High byte | 0d<br>( Start address)<br>Low byte | 00<br>(compress 2 start delay)<br>High byte | XX<br>(compress 2 start delay)<br>Low byte | CRC low | CRC high |

Setting value: 0001~0005 min

Command frame 16: Set the working mode

| Byte 1             | Byte 2               | Byte 3                             | Byte 4                             | Byte 5                            | Byte 6                           | Byte 7  | Byte 8   |
|--------------------|----------------------|------------------------------------|------------------------------------|-----------------------------------|----------------------------------|---------|----------|
| Thermostat address | 06<br>(command code) | 00<br>(Start address)<br>High byte | 0f<br>( Start address)<br>Low byte | 00<br>(Working mode)<br>High byte | XX<br>(Working mode)<br>Low byte | CRC low | CRC high |

Setting value: 00 – cooling, 01 – heating

Command frame 17: Set the address for RS485

| Byte 1             | Byte 2               | Byte 3                             | Byte 4                             | Byte 5                                 | Byte 6                                | Byte 7  | Byte 8   |
|--------------------|----------------------|------------------------------------|------------------------------------|--|---------------------------------------|---------|----------|
| Thermostat address | 06<br>(command code) | 00<br>(Start address)<br>High byte | 10<br>( Start address)<br>Low byte | 00<br>(Address for RS485)<br>High byte | XX<br>(Address for RS485)<br>Low byte | CRC low | CRC high |

Setting value: address :1 – 254

## CP1-485 communication protocol Single stage DX system

### 1.Basic description

| Number | Parameter          | Protocol provision                               |
|--------|--------------------|--|
| 1      | Operating mode     | RS-485, master-slave, thermostat is the slave    |
| 2      | Physical interface | A(+), B(-) two-wire system                       |
| 3      | Baud rate          | 9600   |
| 4      | Byte format        | 10 format ( 1 start bit+8 data bits +1 stop bit) |
| 5      | Transmission mode  | RTU format (consult MODBUS standard)             |
| 6      | Thermostat address | 1-254  |

|    |                       |   |
|----|-----------------------|---|
| 7  | Command code          | 3, 6(3—read thermostat, 6—set thermostat) |
| 8  | CRC check code        | CRC-16(consult MODBUS standard)           |
| 9  | CRC verification mode | CRC-16(consult MODBUS standard)           |
| 10 | Data frame interval   | Greater than 4 bytes                      |

## 2. Read the thermostat frame format

Command frame (give by upper computer): Read the thermostat state

| Byte 1             | Byte 2               | Byte 3                             | Byte 4                            | Byte 5                              | Byte 6                             | Byte 7  | Byte 8   |
|--------------------|----------------------|------------------------------------|-----------------------------------|-------------------------------------|------------------------------------|---------|----------|
| Thermostat address | 03<br>(command code) | 00<br>(Start address)<br>High byte | 00<br>(Start address)<br>Low byte | 00<br>(register count)<br>High byte | 0c<br>(register count)<br>Low byte | CRC low | CRC high |

Response frame (give by thermostat)

| Byte 1             | Byte 2               | Byte 3              | Byte 4...Byte 27                         | Byte 28 | Byte 29  |
|--------------------|----------------------|---------------------|--|---------|----------|
| Thermostat address | 03<br>(command code) | 18<br>Bytes<br>(24) | thermostat state value<br>(12 registers) | CRC low | CRC high |

| Byte   | Value | Instruction  | Register address                         |
|--------|-------|--|--|
| Byte 4 | 00    | Thermostat state is high byte: general is 00   | 0(ON/OFF)<br>( Read/Write )              |
| Byte 5 | 00/01 | Thermostat state is low byte: 00 –OFF, 01— ON  |  |
| Byte 6 | 00    | Thermostat mode high byte: general is 00   | 1(Fan mode)<br>( Read/Write )            |
| Byte 7 | 00~03 | Thermostat mode low byte: three speed fan<br>0 – Auto speed , 01 – High speed , 02 – Med speed<br>03 – Low speed ; single speed fan :00 –ON , 01 –Auto |  |
| Byte 8 | XX    | Setting temperature high byte  | 2(Setting temperature)<br>( Read/Write ) |
| Byte 9 | YY    | Setting temperature low byte   |  |
| Byte10 | 00    | Compressor working state high byte   | 3(Compressor working state)<br>( Read )  |
| Byte11 | 00~02 | Compressor working state low byte :0 –OFF;<br>1 –ON;2-Protecting   |  |
| Byte12 | 00    | Fan working state high byte  | 4(Fan working state)<br>( Read )         |

|        |       |   |   |
|--------|-------|---|---|
| Byte13 | 00~02 | Fan working state low byte: three speed fan<br>0 – close , 1 – High speed , 2 – Med speed ,<br>3 – Low speed ; single speed fan :0 –OFF , 1 –ON | 4(Fan working<br>state)<br>( Read )                           |
| Byte14 | 00    | Room card state high byte   | 5(Room card<br>state)<br>( Read )                             |
| Byte15 | 0~1   | Room card state low byte 00~someone :01~nobody<br>(the default is 1 for no room card, can not modify)   |   |
| Byte16 | 00    | Compressor start dead band high byte  | 6(Compressor<br>start dead band )<br>( Read/Write )           |
| Byte17 | XX    | Compressor start dead band low byte 1°C~5°C   |   |
| Byte18 | 00    | Compressor stop running dead band high byte   | 7(Compressor<br>stop running<br>dead band )<br>( Read/Write ) |
| Byte19 | XX    | Compressor stop running dead band low byte<br>1°C~5°C   |   |
| Byte20 | 00    | Compressor delay time high byte   | 8(Compressor<br>delay time)<br>( Read/Write )                 |
| Byte21 | XX    | Compressor delay time low byte 0~5min   |   |

|        |    |  |   |
|--------|----|--|---|
| Byte22 | XX | The current temperature of the thermostat high byte        | 9(Room<br>temperature)<br>( Read )          |
| Byte23 | YY | The current temperature of the thermostat low byte         |   |
| Byte24 | XX | Thermostat working mode high byte                          | 10(working<br>mode)<br>( Read )             |
| Byte25 | YY | Thermostat working mode low byte 00~cooling;<br>01~heating |   |
| Byte26 | XX | Address for thermostat RS485 high byte                     | 11(Address<br>for RS485 )<br>( Read/Write ) |
| Byte27 | YY | Address for thermostat RS485 low byte<br>address:1-254     |   |

Command frame 1: Read the thermostat ON/OFF state

| Byte 1             | Byte 2               | Byte 3                             | Byte 4                             | Byte 5                              | Byte 6                             | Byte 7  | Byte 8   |
|--------------------|----------------------|------------------------------------|------------------------------------|-------------------------------------|------------------------------------|---------|----------|
| Thermostat address | 03<br>(command code) | 00<br>(Start address)<br>High byte | 00<br>( Start address)<br>Low byte | 00<br>(register count)<br>High byte | 01<br>(register count)<br>Low byte | CRC low | CRC high |

Response frame (give by thermostat)

| Byte 1             | Byte 2               | Byte 3      | Byte 4                            | Byte 5                          | Byte 6  | Byte 7   |
|--------------------|----------------------|-------------|-----------------------------------|---------------------------------|---------|----------|
| Thermostat address | 03<br>(command code) | 02<br>Bytes | 00<br>(ON/OFF state)<br>high byte | XX<br>(ON/OFF state)<br>lowbyte | CRC low | CRC high |

ON/OFF state value: 0000 – Thermostat OFF, 0001 – Thermostat ON

Command frame 2: Read the thermostat fan state

| Byte 1             | Byte 2               | Byte 3                             | Byte 4                             | Byte 5                              | Byte 6                             | Byte 7  | Byte 8   |
|--------------------|----------------------|------------------------------------|------------------------------------|-------------------------------------|------------------------------------|---------|----------|
| Thermostat address | 03<br>(command code) | 00<br>(Start address)<br>High byte | 01<br>( Start address)<br>Low byte | 00<br>(register count)<br>High byte | 01<br>(register count)<br>Low byte | CRC low | CRC high |

Response frame (give by thermostat)

| Byte 1             | Byte 2               | Byte 3      | Byte 4                          | Byte 5                        | Byte 6  | Byte 7   |
|--------------------|----------------------|-------------|---------------------------------|-------------------------------|---------|----------|
| Thermostat address | 03<br>(command code) | 02<br>Bytes | 00<br>(Mode state)<br>high byte | XX<br>(Mode state)<br>lowbyte | CRC low | CRC high |

The Fan working mode : three speed fan:0000 – AUTO, 0001 – High speed ,  
0002 – Med speed, 0003 – Low speed  
Single speed fan: 0000 – ON,0001 – AUTO

Command frame 3: Read the thermostat setting temperature

| Byte 1             | Byte 2               | Byte 3                             | Byte 4                             | Byte 5                              | Byte 6                             | Byte 7  | Byte 8   |
|--------------------|----------------------|------------------------------------|------------------------------------|-------------------------------------|------------------------------------|---------|----------|
| Thermostat address | 03<br>(command code) | 00<br>(Start address)<br>High byte | 02<br>( Start address)<br>Low byte | 00<br>(register count)<br>High byte | 01<br>(register count)<br>Low byte | CRC low | CRC high |

Response frame (give by thermostat)

| Byte 1             | Byte 2               | Byte 3      | Byte 4                                   | Byte 5                                  | Byte 6  | Byte 7   |
|--------------------|----------------------|-------------|--|---|---------|----------|
| Thermostat address | 03<br>(command code) | 02<br>Bytes | XX<br>(setting temperature)<br>high byte | YY<br>(setting temperature)<br>low byte | CRC low | CRC high |

high byte XX= 01, low byte YY= 2c  
 0x012c= 300 (Setting temperature only can be the multiple of 5,  
 the range is 50~350) setting temperature is 30.0℃

Command frame 4: Read the compressor working state

| Byte 1             | Byte 2               | Byte 3                             | Byte 4                             | Byte 5                              | Byte 6                             | Byte 7  | Byte 8   |
|--------------------|----------------------|------------------------------------|------------------------------------|-------------------------------------|------------------------------------|---------|----------|
| Thermostat address | 03<br>(command code) | 00<br>(Start address)<br>High byte | 03<br>( Start address)<br>Low byte | 00<br>(register count)<br>High byte | 01<br>(register count)<br>Low byte | CRC low | CRC high |

Response frame (give by thermostat)

| Byte 1             | Byte 2               | Byte 3      | Byte 4  | Byte 5                                       | Byte 6  | Byte 7   |
|--------------------|----------------------|-------------|---|--|---------|----------|
| Thermostat address | 03<br>(command code) | 02<br>Bytes | XX<br>(compressor working state)<br>high byte | YY<br>(compressor working state)<br>low byte | CRC low | CRC high |

compressor working state : 0000 – OFF,0001 – Running, 0002 – Protecting

Command frame 5: Read the Fan working state

| Byte 1             | Byte 2               | Byte 3                             | Byte 4                             | Byte 5                              | Byte 6                             | Byte 7  | Byte 8   |
|--------------------|----------------------|------------------------------------|------------------------------------|-------------------------------------|------------------------------------|---------|----------|
| Thermostat address | 03<br>(command code) | 00<br>(Start address)<br>High byte | 04<br>( Start address)<br>Low byte | 00<br>(register count)<br>High byte | 01<br>(register count)<br>Low byte | CRC low | CRC high |

Response frame (give by thermostat)

| Byte 1             | Byte 2               | Byte 3      | Byte 4                                     | Byte 5                                    | Byte 6  | Byte 7   |
|--------------------|----------------------|-------------|--|---|---------|----------|
| Thermostat address | 03<br>(command code) | 02<br>Bytes | XX<br>(The fan working state)<br>high byte | YY<br>(The fan working state)<br>low byte | CRC low | CRC high |

The fan working state :three speed fan:0000 – OFF, 0001 – High speed ,  
0002 – Med speed, 0003 – Low speed  
Single speed fan: 0000 – OFF,0001 – ON

Command frame 6: Read the room card state

| Byte 1             | Byte 2               | Byte 3                             | Byte 4                             | Byte 5                              | Byte 6                             | Byte 7  | Byte 8   |
|--------------------|----------------------|------------------------------------|------------------------------------|-------------------------------------|------------------------------------|---------|----------|
| Thermostat address | 03<br>(command code) | 00<br>(Start address)<br>High byte | 06<br>( Start address)<br>Low byte | 00<br>(register count)<br>High byte | 01<br>(register count)<br>Low byte | CRC low | CRC high |

Response frame (give by thermostat)

| Byte 1             | Byte 2               | Byte 3      | Byte 4                               | Byte 5                              | Byte 6  | Byte 7   |
|--------------------|----------------------|-------------|--------------------------------------|-------------------------------------|---------|----------|
| Thermostat address | 03<br>(command code) | 02<br>Bytes | 00<br>(Room card state)<br>high byte | XX<br>(Room card state)<br>low byte | CRC low | CRC high |

0000 – Nobody,0001 – Someone

Command frame 7: Read the compressor starting conditions

| Byte 1             | Byte 2               | Byte 3                             | Byte 4                             | Byte 5                              | Byte 6                             | Byte 7  | Byte 8   |
|--------------------|----------------------|------------------------------------|------------------------------------|-------------------------------------|------------------------------------|---------|----------|
| Thermostat address | 03<br>(command code) | 00<br>(Start address)<br>High byte | 06<br>( Start address)<br>Low byte | 00<br>(register count)<br>High byte | 01<br>(register count)<br>Low byte | CRC low | CRC high |

Response frame (give by thermostat)

| Byte 1             | Byte 2               | Byte 3      | Byte 4  | Byte 5                                       | Byte 6  | Byte 7   |
|--------------------|----------------------|-------------|---|--|---------|----------|
| Thermostat address | 03<br>(command code) | 02<br>Bytes | 00<br>(Compress start dead band)<br>high byte | XX<br>(Compress start dead band)<br>low byte | CRC low | CRC high |

0001°C,0002°C, 0003°C, 0004°C, 0005°C

Command frame 8: Read the compressor stop conditions

| Byte 1             | Byte 2               | Byte 3                             | Byte 4                             | Byte 5                              | Byte 6                             | Byte 7  | Byte 8   |
|--------------------|----------------------|------------------------------------|------------------------------------|-------------------------------------|------------------------------------|---------|----------|
| Thermostat address | 03<br>(command code) | 00<br>(Start address)<br>High byte | 07<br>( Start address)<br>Low byte | 00<br>(register count)<br>High byte | 01<br>(register count)<br>Low byte | CRC low | CRC high |

Response frame (give by thermostat)

| Byte 1             | Byte 2               | Byte 3      | Byte 4                                       | Byte 5                                      | Byte 6  | Byte 7   |
|--------------------|----------------------|-------------|--|---|---------|----------|
| Thermostat address | 03<br>(command code) | 02<br>Bytes | 00<br>(Compress stop dead band)<br>high byte | XX<br>(Compress stop dead band)<br>low byte | CRC low | CRC high |

0001°C,0002°C, 0003°C, 0004°C, 0005°C



Command frame 9: Read the compressor restart delay

| Byte 1             | Byte 2               | Byte 3                             | Byte 4                             | Byte 5                              | Byte 6                             | Byte 7  | Byte 8   |
|--------------------|----------------------|------------------------------------|------------------------------------|-------------------------------------|------------------------------------|---------|----------|
| Thermostat address | 03<br>(command code) | 00<br>(Start address)<br>High byte | 08<br>( Start address)<br>Low byte | 00<br>(register count)<br>High byte | 01<br>(register count)<br>Low byte | CRC low | CRC high |

Response frame (give by thermostat)

| Byte 1             | Byte 2               | Byte 3      | Byte 4                                      | Byte 5                                     | Byte 6  | Byte 7   |
|--------------------|----------------------|-------------|---|--|---------|----------|
| Thermostat address | 03<br>(command code) | 02<br>Bytes | 00<br>(Compress restart delay)<br>high byte | XX<br>(Compress restart delay)<br>low byte | CRC low | CRC high |

0000~0005min

Command frame 10: Read the current temperature of the thermostat

| Byte 1             | Byte 2               | Byte 3                             | Byte 4                             | Byte 5                              | Byte 6                             | Byte 7  | Byte 8   |
|--------------------|----------------------|------------------------------------|------------------------------------|-------------------------------------|------------------------------------|---------|----------|
| Thermostat address | 03<br>(command code) | 00<br>(Start address)<br>High byte | 09<br>( Start address)<br>Low byte | 00<br>(register count)<br>High byte | 01<br>(register count)<br>Low byte | CRC low | CRC high |

Response frame (give by thermostat)

| Byte 1             | Byte 2               | Byte 3      | Byte 4  | Byte 5                                       | Byte 6  | Byte 7   |
|--------------------|----------------------|-------------|---|--|---------|----------|
| Thermostat address | 03<br>(command code) | 02<br>Bytes | XX<br>(The current temperature )<br>high byte | YY<br>(The current temperature )<br>low byte | CRC low | CRC high |

High byte XX= 01, low byte YY= 2c  
0x012c= 300 the room temperature is 30.0℃

Command frame 11: Read the thermostat working mode

| Byte 1             | Byte 2               | Byte 3                             | Byte 4                             | Byte 5                              | Byte 6                             | Byte 7  | Byte 8   |
|--------------------|----------------------|------------------------------------|------------------------------------|-------------------------------------|------------------------------------|---------|----------|
| Thermostat address | 03<br>(command code) | 00<br>(Start address)<br>High byte | 0a<br>( Start address)<br>Low byte | 00<br>(register count)<br>High byte | 01<br>(register count)<br>Low byte | CRC low | CRC high |

Response frame (give by thermostat)

| Byte 1             | Byte 2               | Byte 3      | Byte 4                            | Byte 5                           | Byte 6  | Byte 7   |
|--------------------|----------------------|-------------|-----------------------------------|----------------------------------|---------|----------|
| Thermostat address | 03<br>(command code) | 02<br>Bytes | XX<br>(Working mode)<br>high byte | YY<br>(Working mode)<br>low byte | CRC low | CRC high |

00:cooling

Command frame 12: Read the address of RS485

| Byte 1             | Byte 2               | Byte 3                             | Byte 4                             | Byte 5                              | Byte 6                             | Byte 7  | Byte 8   |
|--------------------|----------------------|------------------------------------|------------------------------------|-------------------------------------|------------------------------------|---------|----------|
| Thermostat address | 03<br>(command code) | 00<br>(Start address)<br>High byte | 0b<br>( Start address)<br>Low byte | 00<br>(register count)<br>High byte | 01<br>(register count)<br>Low byte | CRC low | CRC high |

Response frame (give by thermostat)

| Byte 1             | Byte 2               | Byte 3      | Byte 4                                 | Byte 5                                | Byte 6  | Byte 7   |
|--------------------|----------------------|-------------|--|---------------------------------------|---------|----------|
| Thermostat address | 03<br>(command code) | 02<br>Bytes | XX<br>(address of RS485 )<br>high byte | YY<br>(address of RS485 )<br>low byte | CRC low | CRC high |

Low byte address:1-254

### 3. Set the thermostat frame format

Command frame 1 (give by upper computer) : Set the thermostat ON/OFF

| Byte 1             | Byte 2               | Byte 3                             | Byte 4                             | Byte 5                             | Byte 6                            | Byte 7  | Byte 8   |
|--------------------|----------------------|------------------------------------|------------------------------------|------------------------------------|-----------------------------------|---------|----------|
| Thermostat address | 06<br>(command code) | 00<br>(Start address)<br>High byte | 00<br>( Start address)<br>Low byte | 00<br>(Setting value)<br>High byte | XX<br>(Setting value)<br>Low byte | CRC low | CRC high |

Setting value: 0000 – thermostat OFF, 0001 – thermostat ON;  
 Response frame: correctly operate, the instruction will return to the same;  
 Operation is not correct does not response, the upper computer will manage;  
 The rule about subsequent response of setup command is same with this.

Command frame 2 (give by upper computer) : Set the fan mode

| Byte 1             | Byte 2               | Byte 3                             | Byte 4                             | Byte 5                             | Byte 6                            | Byte 7  | Byte 8   |
|--------------------|----------------------|------------------------------------|------------------------------------|------------------------------------|-----------------------------------|---------|----------|
| Thermostat address | 06<br>(command code) | 00<br>(Start address)<br>High byte | 01<br>( Start address)<br>Low byte | 00<br>(Setting value)<br>High byte | XX<br>(Setting value)<br>Low byte | CRC low | CRC high |

The fan working state :three speed fan:0000 – AUTO, 0001 – High speed ,  
 0002 – Med speed, 0003 – Low speed  
 Single speed fan: 0000 – ON,0001 – AUTO

Command frame 3 (give by upper computer) : Set the setting temperature

| Byte 1             | Byte 2               | Byte 3                             | Byte 4                             | Byte 5                                   | Byte 6                                  | Byte 7  | Byte 8   |
|--------------------|----------------------|------------------------------------|------------------------------------|--|---|---------|----------|
| Thermostat address | 06<br>(command code) | 00<br>(Start address)<br>High byte | 02<br>( Start address)<br>Low byte | XX<br>(Setting temperature)<br>High byte | YY<br>(Setting temperature)<br>Low byte | CRC low | CRC high |

High byte XX= 01 Low byte YY= 2c  
 0x012c= 300 (setting temperature only can be the multiple of 5,  
 the range is 50~350) setting temperature is 30.0℃.

Command frame 7: Set the start conditions for compressor

| Byte 1             | Byte 2               | Byte 3                             | Byte 4                             | Byte 5   | Byte 6  | Byte 7  | Byte 8   |
|--------------------|----------------------|------------------------------------|------------------------------------|--|---|---------|----------|
| Thermostat address | 06<br>(command code) | 00<br>(Start address)<br>High byte | 06<br>( Start address)<br>Low byte | 00<br>(compressor start dead band )<br>High byte | XX<br>(compressor start dead band )<br>Low byte | CRC low | CRC high |

start conditions for compressor :0001℃,0002℃, 0003℃, 0004℃, 0005℃

Command frame 8: Set the stop conditions for compressor

| Byte 1             | Byte 2               | Byte 3                             | Byte 4                             | Byte 5   | Byte 6  | Byte 7  | Byte 8   |
|--------------------|----------------------|------------------------------------|------------------------------------|--|---|---------|----------|
| Thermostat address | 06<br>(command code) | 00<br>(Start address)<br>High byte | 07<br>( Start address)<br>Low byte | 00<br>(compressor stop dead band)<br>High byte | XX<br>(compressor stop dead band)<br>Low byte | CRC low | CRC high |

Stop conditions for compressor :0001℃,0002℃, 0003℃, 0004℃, 0005℃

Command frame 9: Set the restart delay for compressor

| Byte 1             | Byte 2               | Byte 3                             | Byte 4                             | Byte 5                                      | Byte 6                                     | Byte 7  | Byte 8   |
|--------------------|----------------------|------------------------------------|------------------------------------|---|--|---------|----------|
| Thermostat address | 06<br>(command code) | 00<br>(Start address)<br>High byte | 08<br>( Start address)<br>Low byte | 00<br>(compress restart delay)<br>High byte | XX<br>(compress restart delay)<br>Low byte | CRC low | CRC high |

Setting value: 0000~0005 min

Command frame 12: Set the address for RS485

| Byte 1             | Byte 2               | Byte 3                             | Byte 4                             | Byte 5                                 | Byte 6                                | Byte 7  | Byte 8   |
|--------------------|----------------------|------------------------------------|------------------------------------|--|---------------------------------------|---------|----------|
| Thermostat address | 06<br>(command code) | 00<br>(Start address)<br>High byte | 0b<br>( Start address)<br>Low byte | 00<br>(Address for RS485)<br>High byte | XX<br>(Address for RS485)<br>Low byte | CRC low | CRC high |

Setting value: address :1 – 254

## FAN-485 communication protocol Fan coil system

### 1. Basic description

| Number | Parameter          | Protocol provision                                 |
|--------|--------------------|--|
| 1      | Operating mode     | RS-485, master-slave, thermostat is the slave      |
| 2      | Physical interface | A(+), B(-) two-wire system                         |
| 3      | Baud rate          | 9600   |
| 4      | Byte format        | 10 format (1 start bit + 8 data bits + 1 stop bit) |
| 5      | Transmission mode  | RTU format (consult MODBUS standard)               |
| 6      | Thermostat address | 1-254  |

|    |                       |  |
|----|-----------------------|--|
| 7  | Command code          | 3, 6 (3—read thermostat, 6—set thermostat) |
| 8  | CRC check code        | CRC-16 (consult MODBUS standard)           |
| 9  | CRC verification mode | CRC-16 (consult MODBUS standard)           |
| 10 | Data frame interval   | Greater than 4 bytes                       |

## 2. Read the thermostat frame format

Command frame (give by upper computer): Read the thermostat state

| Byte 1             | Byte 2               | Byte 3                             | Byte 4                            | Byte 5                              | Byte 6                             | Byte 7  | Byte 8   |
|--------------------|----------------------|------------------------------------|-----------------------------------|-------------------------------------|------------------------------------|---------|----------|
| Thermostat address | 03<br>(command code) | 00<br>(Start address)<br>High byte | 00<br>(Start address)<br>Low byte | 00<br>(register count)<br>High byte | 0a<br>(register count)<br>Low byte | CRC low | CRC high |

Response frame (give by thermostat)

| Byte 1             | Byte 2               | Byte 3              | Byte 4...Byte 23                         | Byte 24 | Byte 25  |
|--------------------|----------------------|---------------------|--|---------|----------|
| Thermostat address | 03<br>(command code) | 14<br>Bytes<br>(20) | thermostat state value<br>(10 registers) | CRC low | CRC high |

| Byte   | Value | Instruction  | Register address                         |
|--------|-------|--|--|
| Byte 4 | 00    | Thermostat state is high byte: general is 00   | 0(ON/OFF)<br>( Read/Write )              |
| Byte 5 | 00/01 | Thermostat state is low byte: 00 –OFF, 01— ON  |  |
| Byte 6 | 00    | Thermostat mode high byte: general is 00   | 1(Fan mode)<br>( Read/Write )            |
| Byte 7 | 00~03 | Thermostat mode low byte: three speed fan<br>0 – AUTO , 01 – High speed , 02 – Med speed<br>03 – Low speed                                       |  |
| Byte 8 | XX    | Setting temperature high byte  | 2(Setting temperature)<br>( Read/Write ) |
| Byte 9 | YY    | Setting temperature low byte   |  |
| Byte10 | 00    | Fan working state high byte  | 3(Fan working state)<br>( Read )         |
| Byte11 | 00~02 | Fan working state low byte: three speed fan<br>0 – close , 1 – High speed , 2 – Med speed ,<br>3 – Low speed ; one speed fan :0 –close , 1 –open |  |
| Byte12 | 00    | Room card state high byte  | 4(Room card state)( Read )               |

|        |     |   |  |
|--------|-----|---|--|
| Byte13 | 0~1 | Room card state low byte 00--someone;01--nobody (the default is 1 for no room card, can not modify) | 4(Room card state)<br>( Read )                         |
| Byte14 | 00  | The valve start dead band high byte   | 5(The valve start dead band )<br>( Read/Write )        |
| Byte15 | XX  | The valve start dead band low byte 1°C~5°C  |  |
| Byte16 | 00  | The valve stop running dead band high byte  | 6(The valve stop running dead band )<br>( Read/Write ) |
| Byte17 | XX  | The valve stop running dead band low byte 1°C~5°C   |  |
| Byte18 | XX  | The current temperature of the thermostat high byte   | 7(Room temperature)<br>( Read )                        |
| Byte19 | YY  | The current temperature of the thermostat low byte  |  |
| Byte20 | XX  | Thermostat working mode high byte   | 8(working mode)<br>( Read/Write )                      |
| Byte21 | YY  | Thermostat working mode low byte 00~cooling; 01~heating;02~single fan speed                         |  |

|        |    |   |  |
|--------|----|---|--|
| Byte22 | XX | Address for thermostat RS485 high byte              | 11(Address for RS485 )<br>( Read/Write ) |
| Byte23 | YY | Address for thermostat RS485 low byte address:1-254 |  |

Command frame 1: Read the thermostat ON/OFF state

| Byte 1             | Byte 2               | Byte 3                             | Byte 4                             | Byte 5                              | Byte 6                             | Byte 7  | Byte 8   |
|--------------------|----------------------|------------------------------------|------------------------------------|-------------------------------------|------------------------------------|---------|----------|
| Thermostat address | 03<br>(command code) | 00<br>(Start address)<br>High byte | 00<br>( Start address)<br>Low byte | 00<br>(register count)<br>High byte | 01<br>(register count)<br>Low byte | CRC low | CRC high |

Response frame (give by thermostat)

| Byte 1             | Byte 2               | Byte 3      | Byte 4                            | Byte 5                          | Byte 6  | Byte 7   |
|--------------------|----------------------|-------------|-----------------------------------|---------------------------------|---------|----------|
| Thermostat address | 03<br>(command code) | 02<br>Bytes | 00<br>(ON/OFF state)<br>High byte | XX<br>(ON/OFF state)<br>Lowbyte | CRC low | CRC high |

ON/OFF state value: 0000 – Thermostat OFF, 0001 – Thermostat ON

Command frame 2: Read the thermostat fan state

| Byte 1             | Byte 2               | Byte 3                             | Byte 4                             | Byte 5                              | Byte 6                             | Byte 7  | Byte 8   |
|--------------------|----------------------|------------------------------------|------------------------------------|-------------------------------------|------------------------------------|---------|----------|
| Thermostat address | 03<br>(command code) | 00<br>(Start address)<br>High byte | 01<br>( Start address)<br>Low byte | 00<br>(register count)<br>High byte | 01<br>(register count)<br>Low byte | CRC low | CRC high |

Response frame (give by thermostat)

| Byte 1             | Byte 2               | Byte 3      | Byte 4                          | Byte 5                        | Byte 6  | Byte 7   |
|--------------------|----------------------|-------------|---------------------------------|-------------------------------|---------|----------|
| Thermostat address | 03<br>(command code) | 02<br>Bytes | 00<br>(Mode state)<br>High byte | XX<br>(Mode state)<br>Lowbyte | CRC low | CRC high |

The Fan working mode : three speed fan:0000 – AUTO, 0001 – High speed , 0002 – Med speed, 0003 – Low speed



Command frame 3: Read the thermostat setting temperature

| Byte 1             | Byte 2               | Byte 3                             | Byte 4                             | Byte 5                              | Byte 6                             | Byte 7  | Byte 8   |
|--------------------|----------------------|------------------------------------|------------------------------------|-------------------------------------|------------------------------------|---------|----------|
| Thermostat address | 03<br>(command code) | 00<br>(Start address)<br>High byte | 02<br>( Start address)<br>Low byte | 00<br>(register count)<br>High byte | 01<br>(register count)<br>Low byte | CRC low | CRC high |

Response frame (give by thermostat)

| Byte 1             | Byte 2               | Byte 3      | Byte 4                                   | Byte 5                                  | Byte 6  | Byte 7   |
|--------------------|----------------------|-------------|--|---|---------|----------|
| Thermostat address | 03<br>(command code) | 02<br>Bytes | XX<br>(setting temperature)<br>High byte | YY<br>(setting temperature)<br>Low byte | CRC low | CRC high |

high byte XX= 01, low byte YY= 2c  
 0x012c= 300 (Setting temperature only can be the multiple of 5,  
 the range is 50~350) setting temperature is 30.0°C

Command frame 4: Read the Fan working state

| Byte 1             | Byte 2               | Byte 3                             | Byte 4                             | Byte 5                              | Byte 6                             | Byte 7  | Byte 8   |
|--------------------|----------------------|------------------------------------|------------------------------------|-------------------------------------|------------------------------------|---------|----------|
| Thermostat address | 03<br>(command code) | 00<br>(Start address)<br>High byte | 03<br>( Start address)<br>Low byte | 00<br>(register count)<br>High byte | 01<br>(register count)<br>Low byte | CRC low | CRC high |

Response frame (give by thermostat)

| Byte 1             | Byte 2               | Byte 3      | Byte 4                                     | Byte 5                                    | Byte 6  | Byte 7   |
|--------------------|----------------------|-------------|--|---|---------|----------|
| Thermostat address | 03<br>(command code) | 02<br>Bytes | XX<br>(The fan working state)<br>High byte | YY<br>(The fan working state)<br>Low byte | CRC low | CRC high |

The fan working state :0000 – OFF, 0001 – High speed ,  
 0002 – Med speed, 0003 – Low speed

Command frame 5: Read the room card state

| Byte 1             | Byte 2               | Byte 3                             | Byte 4                             | Byte 5                              | Byte 6                             | Byte 7  | Byte 8   |
|--------------------|----------------------|------------------------------------|------------------------------------|-------------------------------------|------------------------------------|---------|----------|
| Thermostat address | 03<br>(command code) | 00<br>(Start address)<br>High byte | 04<br>( Start address)<br>Low byte | 00<br>(register count)<br>High byte | 01<br>(register count)<br>Low byte | CRC low | CRC high |

Response frame (give by thermostat)

| Byte 1             | Byte 2               | Byte 3      | Byte 4                               | Byte 5                              | Byte 6  | Byte 7   |
|--------------------|----------------------|-------------|--------------------------------------|-------------------------------------|---------|----------|
| Thermostat address | 03<br>(command code) | 02<br>Bytes | 00<br>(Room card state)<br>High byte | XX<br>(Room card state)<br>Low byte | CRC low | CRC high |

0000 – Nobody,0001 – Someone

Command frame 6: Read the valve starting conditions

| Byte 1             | Byte 2               | Byte 3                             | Byte 4                             | Byte 5                              | Byte 6                             | Byte 7  | Byte 8   |
|--------------------|----------------------|------------------------------------|------------------------------------|-------------------------------------|------------------------------------|---------|----------|
| Thermostat address | 03<br>(command code) | 00<br>(Start address)<br>High byte | 05<br>( Start address)<br>Low byte | 00<br>(register count)<br>High byte | 01<br>(register count)<br>Low byte | CRC low | CRC high |

Response frame (give by thermostat)

| Byte 1             | Byte 2               | Byte 3      | Byte 4   | Byte 5  | Byte 6  | Byte 7   |
|--------------------|----------------------|-------------|--|---|---------|----------|
| Thermostat address | 03<br>(command code) | 02<br>Bytes | 00<br>(The valve start dead band)<br>High byte | XX<br>(The valve start dead band)<br>Low byte | CRC low | CRC high |

0001°C,0002°C, 0003°C, 0004°C, 0005°C

Command frame 7 : Read the valve stop conditions

| Byte 1             | Byte 2               | Byte 3                             | Byte 4                             | Byte 5                              | Byte 6                             | Byte 7  | Byte 8   |
|--------------------|----------------------|------------------------------------|------------------------------------|-------------------------------------|------------------------------------|---------|----------|
| Thermostat address | 03<br>(command code) | 00<br>(Start address)<br>High byte | 06<br>( Start address)<br>Low byte | 00<br>(register count)<br>High byte | 01<br>(register count)<br>Low byte | CRC low | CRC high |

Response frame (give by thermostat)

| Byte 1             | Byte 2               | Byte 3      | Byte 4  | Byte 5                                       | Byte 6  | Byte 7   |
|--------------------|----------------------|-------------|---|--|---------|----------|
| Thermostat address | 03<br>(command code) | 02<br>Bytes | 00<br>(The valve stop dead band)<br>High byte | XX<br>(The valve stop dead band)<br>Low byte | CRC low | CRC high |

0001°C,0002°C, 0003°C, 0004°C, 0005°C

Command frame 8: Read the current temperature of the thermostat

| Byte 1             | Byte 2               | Byte 3                             | Byte 4                             | Byte 5                              | Byte 6                             | Byte 7  | Byte 8   |
|--------------------|----------------------|------------------------------------|------------------------------------|-------------------------------------|------------------------------------|---------|----------|
| Thermostat address | 03<br>(command code) | 00<br>(Start address)<br>High byte | 07<br>( Start address)<br>Low byte | 00<br>(register count)<br>High byte | 01<br>(register count)<br>Low byte | CRC low | CRC high |

Response frame (give by thermostat)

| Byte 1             | Byte 2               | Byte 3      | Byte 4  | Byte 5                                       | Byte 6  | Byte 7   |
|--------------------|----------------------|-------------|---|--|---------|----------|
| Thermostat address | 03<br>(command code) | 02<br>Bytes | XX<br>(The current temperature )<br>High byte | YY<br>(The current temperature )<br>Low byte | CRC low | CRC high |

High byte XX= 01, low byte YY= 2c  
0x012c= 300 the room temperature is 30.0°C

Command frame 9: Read the thermostat working mode

| Byte 1             | Byte 2               | Byte 3                             | Byte 4                             | Byte 5                              | Byte 6                             | Byte 7  | Byte 8   |
|--------------------|----------------------|------------------------------------|------------------------------------|-------------------------------------|------------------------------------|---------|----------|
| Thermostat address | 03<br>(command code) | 00<br>(Start address)<br>High byte | 08<br>( Start address)<br>Low byte | 00<br>(register count)<br>High byte | 01<br>(register count)<br>Low byte | CRC low | CRC high |

Response frame (give by thermostat)

| Byte 1             | Byte 2               | Byte 3      | Byte 4                            | Byte 5                           | Byte 6  | Byte 7   |
|--------------------|----------------------|-------------|-----------------------------------|----------------------------------|---------|----------|
| Thermostat address | 03<br>(command code) | 02<br>Bytes | XX<br>(Working mode)<br>high byte | YY<br>(Working mode)<br>low byte | CRC low | CRC high |

00:cooling 01:heating 02:single speed fan

Command frame 10: Read the address of RS485

| Byte 1             | Byte 2               | Byte 3                             | Byte 4                             | Byte 5                              | Byte 6                             | Byte 7  | Byte 8   |
|--------------------|----------------------|------------------------------------|------------------------------------|-------------------------------------|------------------------------------|---------|----------|
| Thermostat address | 03<br>(command code) | 00<br>(Start address)<br>High byte | 09<br>( Start address)<br>Low byte | 00<br>(register count)<br>High byte | 01<br>(register count)<br>Low byte | CRC low | CRC high |

Response frame (give by thermostat)

| Byte 1             | Byte 2               | Byte 3      | Byte 4                                 | Byte 5                                | Byte 6  | Byte 7   |
|--------------------|----------------------|-------------|--|---------------------------------------|---------|----------|
| Thermostat address | 03<br>(command code) | 02<br>Bytes | XX<br>(address of RS485 )<br>high byte | YY<br>(address of RS485 )<br>low byte | CRC low | CRC high |

Low byte address:1-254

### 3. Set the thermostat frame format

Command frame 1 (give by upper computer) : Set the thermostat ON/OFF

| Byte 1             | Byte 2               | Byte 3                             | Byte 4                             | Byte 5                             | Byte 6                            | Byte 7  | Byte 8   |
|--------------------|----------------------|------------------------------------|------------------------------------|------------------------------------|-----------------------------------|---------|----------|
| Thermostat address | 06<br>(command code) | 00<br>(Start address)<br>High byte | 00<br>( Start address)<br>Low byte | 00<br>(Setting value)<br>High byte | XX<br>(Setting value)<br>Low byte | CRC low | CRC high |

Setting value: 0000 – thermostat OFF, 0001 – thermostat ON;  
 Response frame: correctly operate, the instruction will return to the same;  
 Operation is not correct does not response, the upper computer will manage;  
 The rule about subsequent response of setup command is same with this.

Command frame 2 (give by upper computer) : Set the fan mode

| Byte 1             | Byte 2               | Byte 3                             | Byte 4                             | Byte 5                             | Byte 6                            | Byte 7  | Byte 8   |
|--------------------|----------------------|------------------------------------|------------------------------------|------------------------------------|-----------------------------------|---------|----------|
| Thermostat address | 06<br>(command code) | 00<br>(Start address)<br>High byte | 01<br>( Start address)<br>Low byte | 00<br>(Setting value)<br>High byte | XX<br>(Setting value)<br>Low byte | CRC low | CRC high |

The fan working state :three speed fan:0000 – AUTO, 0001 – High speed ,  
 0002 – Med speed , 0003 – Low speed

Command frame 3 (give by upper computer) : Set the setting temperature

| Byte 1             | Byte 2               | Byte 3                             | Byte 4                             | Byte 5                                   | Byte 6                                  | Byte 7  | Byte 8   |
|--------------------|----------------------|------------------------------------|------------------------------------|--|---|---------|----------|
| Thermostat address | 06<br>(command code) | 00<br>(Start address)<br>High byte | 02<br>( Start address)<br>Low byte | XX<br>(Setting temperature)<br>High byte | YY<br>(Setting temperature)<br>Low byte | CRC low | CRC high |

High byte XX= 01 Low byte YY= 2c  
 0x012c= 300 (setting temperature only can be the multiple of 5,  
 the range is 50~350) setting temperature is 30.0℃.

Command frame 6: Set the start conditions for the valve

| Byte 1             | Byte 2               | Byte 3                             | Byte 4                             | Byte 5   | Byte 6  | Byte 7  | Byte 8   |
|--------------------|----------------------|------------------------------------|------------------------------------|--|---|---------|----------|
| Thermostat address | 06<br>(command code) | 00<br>(Start address)<br>High byte | 05<br>( Start address)<br>Low byte | 00<br>(The valve start dead band)<br>High byte | XX<br>(The valve start dead band)<br>Low byte | CRC low | CRC high |

start conditions for the valve :0001℃,0002℃, 0003℃, 0004℃, 0005℃

Command frame 7 : Set the stop conditions for the valve

| Byte 1             | Byte 2               | Byte 3                             | Byte 4                             | Byte 5  | Byte 6                                       | Byte 7  | Byte 8   |
|--------------------|----------------------|------------------------------------|------------------------------------|---|--|---------|----------|
| Thermostat address | 06<br>(command code) | 00<br>(Start address)<br>High byte | 06<br>( Start address)<br>Low byte | 00<br>(The valve stop dead band)<br>High byte | XX<br>(The valve stop dead band)<br>Low byte | CRC low | CRC high |

Stop conditions for the valve :0001°C,0002°C, 0003°C, 0004°C, 0005°C

Command frame 9: Set the working mode

| Byte 1             | Byte 2               | Byte 3                             | Byte 4                             | Byte 5                            | Byte 6                           | Byte 7  | Byte 8   |
|--------------------|----------------------|------------------------------------|------------------------------------|-----------------------------------|----------------------------------|---------|----------|
| Thermostat address | 06<br>(command code) | 00<br>(Start address)<br>High byte | 08<br>( Start address)<br>Low byte | 00<br>(Working mode)<br>High byte | XX<br>(Working mode)<br>Low byte | CRC low | CRC high |

Setting value: 00:cooling 01:heating 02:single speed fan

Command frame 10 : Set the address for RS485

| Byte 1             | Byte 2               | Byte 3                             | Byte 4                             | Byte 5                                 | Byte 6                                | Byte 7  | Byte 8   |
|--------------------|----------------------|------------------------------------|------------------------------------|--|---------------------------------------|---------|----------|
| Thermostat address | 06<br>(command code) | 00<br>(Start address)<br>High byte | 09<br>( Start address)<br>Low byte | 00<br>(Address for RS485)<br>High byte | XX<br>(Address for RS485)<br>Low byte | CRC low | CRC high |

Setting value : address : 1 – 254