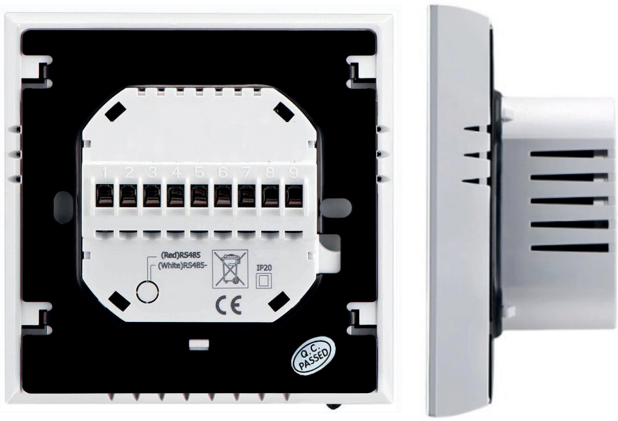
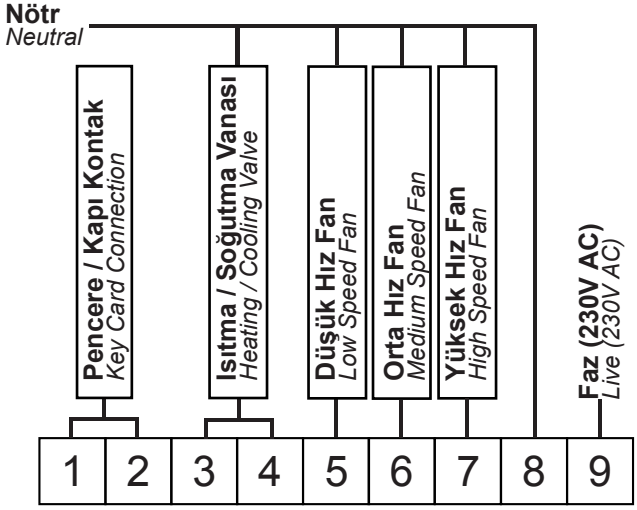
RT226-MB24-S
Modbus Fan Coil Termostatı
Modbus Fan Coil Thermostat

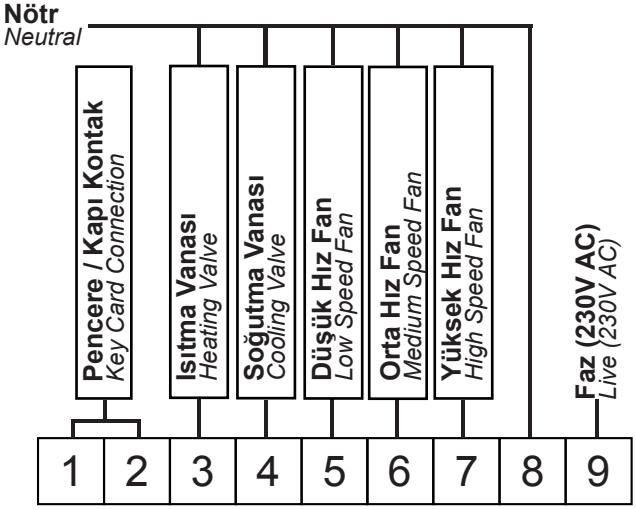
Özellikler *Specification*	:	**2 ve 4 borulu FCU sistemleri için** *2 and 4 pipe FCU systems* **Isıtma / Soğutma mod seçimi** *Heat / Cool mode* **3 hız termostatik fan control** *3 speed thermostatic fan control* **Motorlu vana Oransal kontrol** *Motorised valve Modulating control* **Pencere / Kapı Kontak çıkışı** *Key card function* **RS485 Modbus Haberleşmeli** *RS482 Modbus communication*
Enerji Beslemesi *Power Source*	:	**AC220V±10%, 50/60 Hz**
Sıcaklık Kontrol Aralığı *Temperature Operation*	:	**5-35 °C**
Hassasiyet / *Accuracy*	:	**±0.5 °C**
Max. Akım / *Load Current*	:	**5A**
Montaj / *Installation*	:	**Sıva altı** / *Flush mounting*
Ebatlar / *Dimensions*	:	**86X86X13 mm**
Garanti Süresi / *Warranty*	:	**2 yıl** / 2 years
Marka / *Brand*	:	**Hexa Controls**
Menşei *Origin*	:	**Çin Halk Cumhuriyeti** *People Republic of China (PRC)*



Bağlantı Şeması
Wiring



2 Borulu Fan Coil Bağlantı Şeması
2 Pipe System Fan Coil Wiring



4 Borulu Fan Coil Bağlantı Şeması
4 Pipe System Fan Coil Wiring

Ana kumanda paneline girmek için termostat kapalı iken fan hız butonuna ( ) ve M butonuna aynı anda 5sn süreyle basılı tutunuz. Menüler arasında seçim yapmak için ise tekrar M butonuna basabilirsiniz.
When thermsotat is off, press fan speed button ( ) and M button at the same time for 5secs to enter the parameter setup menu. You can shortly press M button each time to see the menu list.

1	**Sensör Kalibrasyonu** *Sensor Callibraton*	**Yukarı ve aşağı butonları ile ortam sıcaklığının derecesini kalibre edebilirsiniz.** *You can callibrate the room temperature by pressing up and down buttons.*
2	**Termostatik Kontrol** *Thermostatic Control*	**Termostatik fan kontrolü seçimini bu kısımdan yapabilirsiniz. Bu seçim ile istenilen ısıya ulaşıldığında fan ile vanalar aynı anda kapatılabilir veya vanalar kapatılır, fan devam edebilir.** *With this function you may choose to off fan with valves when the thermostat reaches the setup temperature or to keep working fan when valves are off.* **00- Vanalar ve fan aynı zamanda kapanır (fabrika ayarı)** *Valves and fan stop at the same time (default mode)* **01- Vanalar kapanırken fan çalışmaya devam eder** *Valves stop but fan keeps running*
3	**Tuş Kilidi** *Key Lock*	**Termostatı kullanıcı müdahalesine kapamak için tuş kilidini Aşağı ve Yukarı tuluna aynı anda 3sn basılı tutarak aktif hale getirebilirsiniz. Ekranda kilit işareti çıkar.** *To lock the thermostat for user intervention, you can activate the key lock by pressing and holding the Up and Down buttons at the same time for 3 seconds. A key icon appears on the screen.* **00- Açma/Kapama tuşu hariç hepsini kilitleme** *All the buttons are locked except Power* **01- Açma/Kapama tuşu dahil tüm hepsini kilitleme** *All the buttons are locked including Power*
4	**Mod Belirleme** *Mode Sellection*	**Isıtma veya Soğutma modunun ayarını bu bölümden yapabilirsiniz.** *You can sellect the mode function in this parameter.* **00- Sadece soğutma** *Cool only* **01- Isıtma ve soğutma** *Heat and Cool* **02- Sadece Isıtma** *Heat only*
5	**Min. Sıcaklık Ayarı** *Min. Set Temperature*	**Minimum sıcaklık set ayarı 5-15°C aralığında yapabilirsiniz.** *You can sellect the minimum set temperature between 5-15°C*
6	**Maks. Sıcaklık Ayarı** *Max. Set Temperature*	**Maksimum sıcaklık set ayarı 15-35°C aralığında yapabilirsiniz.** *You can sellect the maximum set temperature between 15-35°C*
7	**Zaman Gösterim Ayarı** *Time Display Setting*	**Bu bölümden saat gösterim ayarını yapabilirsiniz.** *You can sellect the time display.* **00- 12 Saat şeklinde gösterim** *12 hours* **01- 24 Saat şeklinde gösterim** *24 hours*
8	**Sıcaklık Göstergesi** *Display Settings*	**Bu bölümden sıcaklık gösterim ayarını yapabilirsiniz.** *You can sellect the temperature display.* **00- Ortam ve Set Edileni göster** *Both set and room temperature* **01- Sadece set edileni göster** *Set temperature only*
9	**Donma Koruma** *Deadzone Temperature*	**Oda sıcaklığı 1-5 °C arasında seçilen sıcaklığın altına düşerse ısıtma devreye girer.** *If the room temperature falls below the selected temperature between 1-5°C, heating will be on.*
A	**Modbus IP Adres** *Modbus IP Address*	**IP adreslemesini yapabilirsiniz 0X00-0XFF** *You can select IP address 0X00-0XFF*
B	**Baudrate**	**1: 9600 - 2: 19200 - 3: 38400 - 4: 56000 - 5: 115200**

Termostat saat ayarlarının yapılması
Setting the clock

Saat ayarı yapmak için M tuşuna basılı tutunuz. Sonrasında saati ayarlamak için M tuşuna basınız, ardından aşağı ve yukarı tuşlarına basarak dakika, gün ve hafta ayarlarını yapabilirsiniz.
Press and hold M to set Clock;Press M to set the minutes of the time,press to adjust the relative values.Same setting for hour and week of the time. After that, all will be confirmed automatically.

Termostat mod ayarlarının yapılması
Setting the modes

Isıtma, soğutma ve havalandırma mod seçimleri için M tuluna basmalısınız. Termostat Havalandırma modundayken vanalar kapalı olur fakat fan devreye girer.
Press M to change the system mode HEATING, COOLING and VENTILATION. In the mode of VENTILATION, the valve is off but the fan runs.

Termostat fan hız ayarlarının yapılması
Setting the fan speed

Termostat fan hız ayarları için fan hız ( ) tuşuna basarak düşük, orta, hızlı ve oto hız ayarını yapabilirsiniz.
Press to select the fan speed AUTO, HIGH, MED, LOW

Thermostat Interface Protocol V1.0

This protocol takes standard Modbus as a reference, mainly for use for communication between thermostat and computer (PC). This protocol doesn't describe Modbus. For information about Modbus, please refer to the relevant standard documents.

Settings

1. Basic description

No	Parameter	Protocol provision
1	Operating mode	RS-485,master-slave ； thermostat is the slave machine
2	Physical interface	A(+),B(-) two-wire system
3	Baud rate	9600 bps
4	Byte format	9 format (8 data bits +1 stop bit)
5	Modbus	RTU
6	Transmission mode	RTU format (Please refer to standard Modbus)
7	Thermostat address	1—255 ； (0 is broadcast address)
8	Command code	03，06 (03—read thermostat, 06—set thermostat)
9	CRC check code	CRC—16 (Please refer to standard Modbus)
10	CRC verification mode	CRC—16 (Please refer to standard Modbus)

2. Read the thermostat frame format

Byte 1	Byte 2	Byte 3	Byte 4	Byte 5	Byte 6	Byte 7	Byte 8
Thermostat address (default is 0X01)	03	Set register start address high byte	Set register start address low byte	Set register Value high address	Set register Value low address	CRC high	CRC low

Command	Byte	Description	Register address
03	High Byte	00	40001
	Low Byte	Setting Power On/off: 0–means closed, 1–means open	
	High Byte	00	40002
	Low Byte	Setting Fan Speed: 0 - Auto speed; 0-Auto speed ;1 - High speed; 2- Mid speed; 3-Low speed	
	High Byte	00	40003
	Low Byte	Setting Mode: 0 – Cooling; 1 – Heating; 2 - Ventilation	
	High Byte	00	40004
	Low Byte	Setting Temperature: Data is Temperature*10	
	High Byte	00	40005
	Low Byte	Setting Lock: 0 – Unlock; 1 – Lock	
	High Byte	00	40006
	Low Byte	Minute (value 0-59)	
	High Byte	00	40007
	Low Byte	Hour (value 0-23)	
	High Byte	00	40008
	Low Byte	Week (value 1-7), 1-Monday, 2-Tuesday, 3-Wednesday, 4- Thursday, 5- Friday, 6- Saturday, 7- Sunday	
	High Byte	00	40009
	Low Byte	Reading Room Temperature: Data is Temperature*10	
	High Byte	00	40010
	Low Byte	Valve 0n =1 Valve off =0	
	High Byte	00	40011
	Low Byte	1 - High speed; 2- Mid speed; 3- Low speed 4-OFF	

3. Set the thermostat frame format

Byte 1	Byte 2	Byte 3	Byte 4	Byte 5	Byte 6	Byte 7	Byte 8
Thermostat address (default is 0X01)	06	Set register start address high byte	Set register start address low byte	Set register Value high address	Set register Value low address	CRC high	CRC low

Command	Byte	Description	Register address
06	High Byte	00	40001
	Low Byte	Setting Power On/off: 0–means closed, 1–means open	
	High Byte	00	40002
	Low Byte	Setting Fan Speed: 0-Auto speed ;1 - High speed; 2- Mid speed; 3-Low speed	
	High Byte	00	40003
	Low Byte	Setting Mode: 0 – Cooling; 1 – Heating; 2 - Ventilation	
	High Byte	00	40004
	Low Byte	Setting Temperature: Data is Temperature*10	
	High Byte	00	40005
	Low Byte	Setting Lock: 0 – Unlock; 1 – Lock	
	High Byte	00	40006
	Low Byte	Minute (value 0-59)	
	High Byte	00	40007
	Low Byte	Hour (value 0-23)	
	High Byte	00	40008
	Low Byte	Week (value 1-7), 1-Monday, 2-Tuesday, 3-Wednesday, 4- Thursday, 5- Friday, 6- Saturday, 7- Sunday	

Remark

1. Format

When the thermostat sends collected temperature data to the PC computer, the value of collected temperature should be multiplied by 2 and sent completely in HEX format because the accuracy is 0.5°C.

For example: **When the collected temperature is 25.5°C**, the value sent from the thermostat to the PC computer will be 255

Similarly, when the PC computer sends set temperature data to the thermostat, the value of the set temperature should be multiplied by 2 and sent completely in HEX format because the accuracy is 0.5°C.

For example: **When the set temperature is 25.5°C**, the value sent from the PC computer to the thermostat should be 255

Example: Read Temperature = 25.5°C
The send (or receive) value is 25.5*10=255

2. How to change the thermostat's IP address?

During power off, press **M** and at the same time for 5 seconds to access system functions.
Press **M** till you reach item A.
Then press and to change the relative value. The default is 0x01.

Turn on your thermostat to save the IP setting.

3. Any data in the address from 40001 to 40005 could be read and written at one time. After 40006, it could be just read or written one by one .