https://wszystkodobasenow.pl/fairland

1. This protocol is compatible with baseboard model number MWH298.
2. The slave number can be modified via 4x: register address 200, please see address description for details.
3. Communication method: RS485, the port name is BAG+12V, standard Modbus-RTU communication protocol, the Slave is the PC board (Address range: 1 ~ 16).
4. Baud rate: 9600.
5. Data format: 1ST + 8DATA + 1SP (1 start bit, 8 data bits, 1 stop bit, no parity bit).
6. The maximum number of consecutive reads of 0x and 1x is 48. When reading data, the first address must be 0 or 48, otherwise incorrect data will be returned.
7. The maximum number of consecutive reads for 3x and 4x is 8.
8. The PC board acts as a Slave and waits 10 seconds after power-on before it starts to receive information from the Master and respond.
9. The communication interval is at least 60s and the default Slave address is 1.

Register Class: 0x, Read/Write, Read command: 01 / Write command: 05

Tips	Register Addr.	Register Content	Range	Unit	Step	Default	Properties	Remark
Allowed as first address when reading	0	Power switch	0~1		1	0	0: Switch off 1: Switch on	Read/Write
	1	Compulsory Defrosting	0~1		1	0	0: Invalid 1: Enter	Read/Write
	2	*Reserved*						
	3~47	*Reserved*						

Register Class: 1x, Read only, Read command: 02 / Write: --

Tips	Register Addr.	Register Content	Range	Unit	Step	Default	Remark	Remark
Allowed as first address when reading	0	ON/OFF	0~1				0: OFF 1: ON	Read-only
	1	Defrosting	0~1				0: OFF 1: ON	Read-only
	2	DIN1	0~1				0: Disconnected 1: Connected	Read-only
	3	DIN2	0~1				0: Disconnected 1: Connected	Read-only
	4	DIN3	0~1				0: Disconnected 1: Connected	Read-only
	5	DIN4	0~1				0: Disconnected 1: Connected	Read-only
	6	DIN5	0~1				0: Disconnected 1: Connected	Read-only
	7	OUT1	0~1				0: Closed 1: Output	Read-only
	8	OUT2	0~1				0: Closed 1: Output	Read-only
	9	OUT3	0~1				0: Closed 1: Output	Read-only
	10	OUT4	0~1				0: Closed 1: Output	Read-only
	11	OUT5	0~1				0: Closed 1: Output	Read-only
	12	OUT6	0~1				0: Closed 1: Output	Read-only
	13	OUT7	0~1				0: Closed 1: Output	Read-only
	14	OUT8	0~1				0: Closed 1: Output	Read-only
	15	OUT9	0~1				0: Closed 1: Output	Read-only
	16	Malfunction / Protection indicator	0~1				0: None 1: Yes	Read-only
	17	Compressor running demands	0~1				0: None 1: Yes	Read-only
	18~47	*Reserved*						
Allowed as first address when reading	48	E0	0~1				0: No 1:Yes	Read-only
	49	E1	0~1				0: No 1:Yes	Read-only
	50	E2	0~1				0: No 1:Yes	Read-only
	51	E3	0~1				0: No 1:Yes	Read-only
	52	E4	0~1				0: No 1:Yes	Read-only
	53	E5	0~1				0: No 1:Yes	Read-only
	54	E6	0~1				0: No 1:Yes	Read-only
	55	E7	0~1				0: No 1:Yes	Read-only
	56	E8	0~1				0: No 1:Yes	Read-only
	60	*Reserved*						
	58	EA	0~1				0: No 1:Yes	Read-only
	59	Eb	0~1				0: No 1:Yes	Read-only
	60	*Reserved*						
	61	Ed	0~1				0: No 1:Yes	Read-only
	62~63	*Reserved*						
	64	P0	0~1				0: No 1:Yes	Read-only
	65	P1	0~1				0: No 1:Yes	Read-only
	66	P2	0~1				0: No 1:Yes	Read-only
	67	P3	0~1				0: No 1:Yes	Read-only
	68	P4	0~1				0: No 1:Yes	Read-only
	69	P5	0~1				0: No 1:Yes	Read-only
	70	P6	0~1				0: No 1:Yes	Read-only
	71	P7	0~1				0: No 1:Yes	Read-only
	72	P8	0~1				0: No 1:Yes	Read-only
	73	P9	0~1				0: No 1:Yes	Read-only
	74	PA	0~1				0: No 1:Yes	Read-only
	75~79	*Reserved*						
	80	F0	0~1				0: No 1:Yes	Read-only
	81	F1	0~1				0: No 1:Yes	Read-only
	82	F2	0~1				0: No 1:Yes	Read-only
	83	F3	0~1				0: No 1:Yes	Read-only
	84	F4	0~1				0: No 1:Yes	Read-only
	85	F5	0~1				0: No 1:Yes	Read-only
	86	F6	0~1				0: No 1:Yes	Read-only
	87	F7	0~1				0: No 1:Yes	Read-only
	88	F8	0~1				0: No 1:Yes	Read-only
	89	F9	0~1				0: No 1:Yes	Read-only
	90	FA	0~1				0: No 1:Yes	Read-only
	91	Fb	0~1				0: No 1:Yes	Read-only
	92~95	*Reserved*						

Register Class: 4x, Read/Write, Read command: 03 / Write command: 06

Tips	Register Addr.	Register Content	Range	Unit	Step	Default	Remark	Remark
Allowed as first address when reading	0	Function Selection	0~2		1	1	0: Auto 1: Heating 2: Cooling	Read/Write
	1	Working Mode Selection	0~2		1	1	0: Silence 1: Smart 2: Turbo (Note: Some models without Turbo)	Read/Write
	2	Auto mode Temp range	84~140		2	112	Temp type 1, see attached table for conversion formula	Read/Write
Allowed as first address when reading	3	Heating Mode Temp Range	96~140		2	112	Temp type 1, see attached table for conversion formula	Read/Write
	4	Cooling Mode Temp Range	84~120		2	112	Temp type 1, see attached table for conversion formula	Read/Write
	5	Water Pump Working Mode (P0)	0~2		1	0	0: Continuous 1: Water temp control 2: Time/water temp control	Read/Write
Allowed as first address when reading	6	Water Pump Working Time Setting (P1)	10~120	min	5	60		Read/Write
	7	Compressor Continuously Running Time Between Defrosting Mode (P2)	30~90	min	1	30		Read/Write
	8	Defrosting Entry Temp (P3)	26~60		2	46	Temp type 1, see attached table for conversion formula	Read/Write
Allowed as first address when reading	9	Maximum Defrosting Time (P4)	1~12	min	1	12		Read/Write

	10	Defrosting Exit Temp (P5)	76~120		2	86	Temp type 1, see attached table for conversion formula	Read/Write
	11~24	*Reserved*						
	25	Power-off restart memory	0~1		1	1	0: No 1: Yes	Read
	26~32	*Reserved*						
...	...	...	...	...	...	...	...	...
	200	Slave address	1~16		1	1	If the Slave address is unknown, it can also be accessed through the virtual address (255). Note: The communication content is all in hexadecimal Read Slave address: FF 03 00 C8 00 01 YY YY Modify Slave address: FF 06 00 C8 XX XX YY YY XXXX: is the Slave address to be modified, YYYY: is CRC Take modifying the Slave address to 10 as an example, the command is: FF 06 00 C8 00 0A 9D ED	Read/Write

Register Class: 3x, Read only, Read command: 04 / Write: --								
Tips	**Register Addr.**	**Register Content**	**Range**	**Unit**	**Step**	**Default**	**Remark**	**Remark**
Allowed as first address when reading	0	Compressor Running Percentage		%				Read-only
	1	Compressor Target Frequency		Hz				Read-only
	2	PFC Voltage		V				Read-only
Allowed as first address when reading	3	Inlet Water Temp (AIN1)		°C			Temp type 1, see attached table for conversion formula	Read-only
	4	Outlet Water Temp (AIN2)		°C			Temp type 1, see attached table for conversion formula	Read-only
	5	Ambient Temp (AIN7)		°C			Temp type 1, see attached table for conversion formula	Read-only
Allowed as first address when reading	6	Gas Exhuast Temp (AIN5)		°C			Temp type 2, see attached table for conversion formula	Read-only
	7	Outer Coil Pipe Temp (Evaporator) (AIN3)		°C			Temp type 1, see attached table for conversion formula	Read-only
	8	Gas Return Temp (AIN6)		°C			Temp type 1, see attached table for conversion formula	Read-only
Allowed as first address when reading	9	Inner Coil Pipe Temp (Titanium Heat Exchanger) (AIN4)		°C			Temp type 1, see attached table for conversion formula	Read-only
	10	Compressor Frequency		Hz				Read-only
	11	Compressor Current		0.1 A				Read-only
Allowed as first address when reading	12	Cooling Plate Temp					Temp type 2, see attached table for conversion formula	Read-only
	13	EEV Opening						Read-only
	14	DC Fan Motor Speed		RPM				Read-only
	15~35	Reserved						

Appendix Contents			
Temp type 1	Actual value = (Displayed value - 60) / 2		
	Displayed value = Actual value * 2 + 60		
	Sample: Display value is 120, then actual temp is (120-60) / 2 = 30 ℃		
Temp type 2	Actual value = Displayed value / 2		
	Displayed value = Actual value * 2		
	Sample: Display value is 120, then actual temp is 120 / 2 = 60 ℃		