REPI Modbus Protocol

Communication Funtction：

RS485

Communication Mode：modbus protocol　RTU

Baud rate：　4800 BPS

Data format：1 start bit +8 data bits+1Odd+1stop bit

Default：1

01 Message：

Function code	Address	Description	Note
01	1	Fan-speed Low	0 close、1 open
01	2	Fan-speed Media	0 close、1 open
01	3	Fan-speed High	0 close、1 open

02 Message：

Function code	Address	Description	Note
02	1	Imput	0 No input, 1 Input
02	2	Temperature sensor	0 Normal,1Malfunction
02	3	Temperature sensor	0 Interior sensor,1 External sensor
02	4	Frost Protect	0：Close 1：Open

03/06 Message

Function code	Address	Description	Note	Setting
03/06	1	Communication address	1- 32	
03/06	2	Model	0: No FCU 4-Pipe 1: 4 Pipe fan coil （HL8102EN - HL8102KN） 2: No FCU 2-Pipe （HL8102AN HL8102BN） 3: 2 Pipe fan coil （HL8102CN HL8102DN）	
03/06	3	Status	0:Off　1:On 2:Sleep	
03/06	4	Mode	0:auto 1:Cooling 2:Heating 3:Ventilation	
03/06	5	FCU	0:auto 1: Low　2: Media 3:High	
03/06	6	Setting temperature*		
03/06	7	Lock button	0: Unlock 1:Lock on	
03/06	8	Sleep Time	0 - 48 hours	
03/06	9	Power on status	0: Off; 1: On; 2: Hold	
03/06	10	Fan speed	0: Single Speed; 1: Three Speed	

03/06	11	Fan mode	0:DA 1:DB	
03/06	12	Sensor selection	0: Internal; 1: Remote	
03/06	13	Temperature format	0: Celsius; 1: Fahrenheit	
03/06	14	Environment Temperature*		5
03/06	15	Minimum setpoint	0 - 995	5
03/06	16	Maximum setpoint *	0 - 995	5
03/06	17	Deadband*	0 -100	5
03/06	18	Maximum setpoint *	0 - 995	5
03/06	19	Cooling sleep setpoint *	0 - 995	5
03/06	20	Input Signal Mode	0: Invalid 1: Changeover(from 8102A to 8102D) 2: thermostat will be sleep without input signal 3: thermostat will be Off without input signal	
03/06	21	Heating reset time	10 – 300sec	10sec
03/06	22	Cooling reset time	10 – 300sec	10sec
03/06	23	Ports mode	0: Modulation & Floating; 1: On/Off	
03/06	24	Valve status as turn off	0: Close; 1:Hold; 2: Open	
03/06	25	Port1 Modulation direction	0:10V Open; 1:10V Close	
03/06	26	Port1 Modulation minimum signal	0（0V/ 0mA）-128（5V/ 10mA）	1
03/06	27	Port1 Modulation proportional	10 - 200	5
03/06	28	Port2 Modulation direction	0:10V Open;1:10V Close	
03/06	29	Port2 Modulation minimum Signal	0（0V/ 0mA）-128（5V/ 10mA）	1
03/06	30	Port2 Modulation proportional *	10 - 200	5
03/06	31	Port1 Floating minimum time	1-9 秒	1sec
03/06	32	Port1 Floating maximum time	10-300 秒	10sec
03/06	33	Port1 Floating minimum time	1-9 秒	1sec
03/06	34	Port1 Floating maximum time	10-300 秒	10sec
03/06	35	Disable / Enable bypass PID control	0: Disable; 1: Enable	
03/06	36	Override output value when bypass PID control Display output value when enable PID control **	0-255	1
03/06	37	Override output value when bypass PID control Display output value when enable PID control **	0-255	1
03/06	38	Input signal management:	0: Input valid 1: Override Input: open 2: Override Input: close	
03/06	39	Display room temperature or set-point	0: Room temperature 1: Set-Point	
03/06	40	Configuration external sensor	0: B = 3950; 1: B = 3450; 2: B = 3900 3: User define (via network. default	

			B = 3950)	
03/06	41	External sensor		
03/06	42	Key Lock	0X80：All key locked 0B0000xywz： x=1：lock ” power” button Y=1：lock “mode” button W=1：lock” fan “ button Z=1：lock “up/down” button	
03/06	43	N/A		
03/06	44	N/A		
03/06	45	Start temperature of Low temperature protection	50/420 （0 /320 disable）	0-150/320-640
03/06	46	Stop temperature of Low temperature protection	70/460	20-170/340-660

04 Message：

Function code	Address	Description	Note
04	1	Temperature	
04	2	Internal sensor temperature*	
04	3	External sensor temperature*	
04	4	N/A	
04	5	Software version	

Note ： * Temperature value is actual value*10

**** Modulation Calculation: For example: setting value is 100**

Actual output voltage is 100/255*10=3.92V

Actual output current is 100/255*20=7.84mA

Calculation of Floating output time： For example: setting value is 100

Port1 Floating minimum time Tval_min=5s

Port1 Floating maximum time Tval_max=260s

So the actual time：100/255*(Tval_max_-Tval_min)=100s

***** A/B A: Celsius; B: Fahrenheit**