T7000 Thermostat Modbus Data Table

Revision History

Name	Revision	Date	Description
Johnny Zhou	1.0	2017/4/25	Initial version
Johnny Zhou	2.0	2018/1/25	Add parameter description and range defintion

MODBUS Interface Definition

Item	Description	Specification
1	Protocol/通信协议	MODBUS
2	Communication Port/物理界面	RS485 / half-duplex RS485 半双工
3	Baud/波特率	9600/4800
4	Device Type/设备类型	RTU
5	Address/地址	01 - 64
6	Function Code/功能代码	1，3，4，6, 16
7	Data Format/字节格式	10 bit: 1 Start, 8 Data, 1 Stop, no parity 10位：1起始位+8数据位+1停止位，无奇偶校验
8	Interface Connection/接口	A（+），B（-）
9	CRC check/ CRC 校验码	CRC-16

Application Product List

T7600-TF21-9JS0　　T7601-TF20-9JS0　　T7600-TF20-9JS0　　T7603-T000-9JF0
T7600-TF21-1JS0　　T7601-TF20-1JS0　　T7600-TF20-1JS0　　T7603-T000-1JF0

01 Function Information

Function code（功能码）	Address（地址）	Point Description	value
01	1	Relay 4	0: off 1:on
01	2	Relay 5	0: off 1:on
01	3	Relay 1	0: off 1:on
01	4	Relay 2	0: off 1:on
01	5	Relay 3	0: off 1:on

04 Function Information

Function code	Address	Point Description	value
04	1	Model模式	Model number + Application[1]
04	2	Room temperature室内温度	Room temperature（0～+99℃）[2]

04	3	Occupancy status门卡信息	00：unoccupied, 01：Occupied 00：拔卡 01：插卡
04	4	Error故障	01: Internal sensor shorted warning. 02: Internal sensor opened warning. 03: High temperature warning. Room Temperature > 55℃. 04: Low temperature warning. Room Temperature < 0℃. 05: Remote sensor shorted. 06: Remote sensor opened. 07: Dew risk warning

03/06/16 Function Information

Function code	Address	Point Description	value
03	1	Model模式	Model number + Application[1]
03	2	Room temperature室内温度	Room temperature * 10（0～+99℃）[2]
03	3	Occupancy status门卡信息	00：unoccupied,拔卡 01： Occupied插卡
03	4	Error	01: Internal sensor shorted warning.内置传感器短路 02: Internal sensor opened warning.内置传感器开路 03: High temperature warning. Room Temperature > 55℃.高温警告，室内温度大于55℃ 04: Low temperature warning. Room Temperature < 0℃.低温警告，室内温度小于0℃ 05: Remote sensor shorted. 外置传感器短路 06: Remote sensor opened. 外置传感器开路 07: Dew risk warning结露警告
03/06/16	5	Power电源	00：Off关闭 01：On开启

03/06/16	6	Mode模式	1: Cooling制冷
			2: heating制热
			3: ventilation通风
03/06/16	7	Set point设置温度	Setting Range设置范围（0～40 ℃）[2]

03/06/16	8	Fan speed风速	00: High高速 01: Medium中速 02:Low低速 03: Auto自动
03/06/16	9	Upper setpoint limit设定值上限	Setting Range设置范围 2～40℃[2]
03/06/16	10	Lower setpoint limit设定值下限	Setting Range设置范围 0～38℃[2]
03/06/16	11	Unoccupied cooling setpoint门卡拔出后制冷温度	Setting Range设置范围 22～32℃[2]
03/06/16	12	Unoccupied heating setpoint门卡拔出后制热温度	Setting Range设置范围 10～21℃[2]
03/06/16	13	Frost protection霜冻保护	00：On开启　　01：Off关闭
03/06/16	14	Frost protection setpoint防霜冻设定值	Setting Range 0.0～20.0℃[2]
03/06/16	15	Fan in deadband	00: Off　01: Low
03/06/16	16	Unoccupied fan speed门卡拔出风机速度	00: Off停止　　01: Low低速
03/06/16	17	Power recovery after restart掉电记忆	00: keep last status 保持之前状态 01: on开启 02: off关闭
03/06/16	18	Key lock键盘锁	00：No lock 不锁 01：Lock all keys锁定所有键 02：Lock the keys except Fan Speed and Temp Adjustment keys锁定除风速及温度调节键 03：Lock the ON/OFF and Clock keys锁定开关及时钟键 04：Lock the keys except ON/OFF key锁定除开/关键
03/06/16	19	Screen display屏幕显示	00：Display room temp显示房间温度 01：Display setpoint显示温度设置

| 03/06/16 | 20 | BI function门卡输入功能 | 00：Open indicates key card is inserted (occupied);开启表明房卡插入 Closed indicates key card is pulled out (unoccupied)关闭表明房卡拔出 |
| | | | 01：Closed indicates key card is inserted (occupied);关闭表示房卡插入 Open |

			indicates key card is pulled out (unoccupied开启表明房卡拔出 02: closed indicates dew point risk, open indicates no dew point risk关闭表明结露保护，开启表明无结露保护 03: open indicates dew point risk, closed indicates no dew point risk开启表明结露保护，关闭表明无结露保护 04: Open indicates occupied; Close indicates unoccupied, shut off fan and valve开启表明使用中，关闭表明未使用，关闭风机及水阀 05: closed indicates filter alarm关闭表明过滤器报警 06: open indicates filter alarm开启表明过滤器报警
03/06/16	21	Temperature unit温度单位	00：Celsius Degree (℃)摄氏度 01：Fahrenheit Degree（℉）华氏度
03/06/16	22	Sensor offset传感器偏移	Setting Range设置范围 -5～5℃ 2)
03/06/16	23	Fan speed limit风速限制	00: 3 speed3档 01: 2 speed2档 02: 1 speed1档 03: no fan关闭
03/06/16	24	Language语言	00: Chinese中文 01: English英语
03/06/16	25	Mode selection模式选择	00: Cooling/Heating/Ventilation 制冷/这制热/通风 01: Cooling only单冷 02: Heating only单热
03/06/16	26	LCD backlight LCD背光	05~60 No use after xx seconds, the back light will be off在没有使用xx秒后，背光自动关闭

03/06/16	27	Clock display时钟显示	00: Show clock显示时钟
			01: Hide clock隐藏时钟
03/06/16	28	Remote sensor type外置传感器类型	00: China market 中国市场 10KNTC
			01: JCI type II江森II类型 10KNTC

03/06/16	29	Deadband死区	Setting Range设置范围 0.0～10.0℃ [2]
03/06/16	30	Auto Changeover自动转换	00：Disable禁用 01：Enable使用
03/06/16	31	ECM min voltage ECM最低电压	Min voltage below which the fan output is 0%.风机输出0%时为最低电压 Range 0-10V (0.5V step) [3] 范围0-10V（0.5V渐进）
03/06/16	32	ECM max voltage ECM最高电压	Max voltage above which the fan output is 100%.风机输出100%时为最高电压 Range 0-10V[3]范围0-10V
03/06/16	33	ECM relay ECM继电器	00: Disabled禁用 01: Enabled使用
03/06/16	34	Sample time采样时间	Setting Range设置范围1~99s[3]
03/06/16	35	P	Setting Range设置范围 1~99[3]
03/06/16	36	I	Setting Range设置范围 0~99[3]
03/06/16	37	Inter stage difference for floor heater	Setting Range设置范围 0.0～9.9℃[2]
03/06/16	38	Heating stage for floor heater	00: two stage 01: one stage
03/06/16	39	TIO2/ESP control TIO2/ESP 控制	00: could be controlled separately仅单独控制 01: work with FCU simultaneously.与FCU同时控制
03/06/16	40	Setting of opening time开启时间设定	00: Disable禁用 01: Enable使用
03/06/16	41	Range of opening time开启时间范围	Opening time is a time that valve from fully closed to fully opened,开启时间为水阀从全关至全开 controls will delay next operation until the current operation completed.控制将会延迟至当前动作完成 Range范围: 80-170 seconds
03/06/16	42	Fresh air damper output 新风阀门输出	00: disable禁用 01: enable使用

| 03/06/16 | 43 | TIO2/ESP relay | 00：Off　01：On |
| | | * TiO2/ESP 1 | |

03	44	AO1	PWM DUTY(0-100)
03	45	AO2 (AI for T7600-TB21-9JA0)	PWM DUTY(0-100) AI 0.0-10.0V(0-100) [3]

Note: 1) Higher 8 bits save model and Low bits for application parameter

高8位存储模式，应用参数为低位

2) All temperature expand 10 times. Such as 26.5°C，26.5*10= 265 Register data 01 0A

所有温度放大10倍。如26.5℃，26.5*10= 265，则为01 0A

3) Float number expand 10 times. Such as 9.5，9.5*10= 95 Register data 00 5F

浮点数字放大10倍。如9.5，9.5*10= 95，则为00 5F