MEITAVTEC LTD, 27.03.2022, PIC18F46K22

OBJECT LIST FOR CTU4501 CP HP SUPER ST 01 (ID=21191503)

MODBUS RTU Mode, Address Slave 1-247, Baud rate 9600, no parity, 8bits, 1stop

All Registers Signed Integer 16 bit, W-Register Writable

Command: 0x03 = Read Holding Registers

0x06 = Preset Single Register

0x2B = Read Device Identification (Basic = 0x01, Regular = 0x02)

Command 0x2B (Encapsulated Interface Transport)
MEI Type 0x0E (Read Device Identification)
Read Dev ID code 0x01 (request to get the Basic Device Identification)

ObjectId	Object Name / Description	Type	M/O	Category
0x00	VendorName	ASCII String	**Mandatory**	**Basic**
0x01	ProductCode	ASCII String	**Mandatory**	**Basic**
0x02	MajorMinorRevision	ASCII String	**Mandatory**	**Basic**

VendorName = "Meitav-Tec Ltd"
ProductCode = "CTU4501-CP-HP-SUPER-ST-01"
MajorMinorRevision = "V0.3”

Command 0x2B (Encapsulated Interface Transport)
MEI Type 0x0E (Read Device Identification)
Read Dev ID code 0x02 (request to get the Regular Device Identification)

ObjectId	Object Name / Description	Type	M/O	Category
0x03	VendorUrl	ASCII String	Optional	**Regular**
0x04	ProductName	ASCII String	Optional	**Regular**
0x05	ModelName	ASCII String	Optional	**Regular**
0x06	UserApplicationName	ASCII String	Optional	**Regular**

VendorUrl = “www.meitavtec.com”
ProductName = “CTU4501-CP-HP-SUPER-ST-01”
ModelName = “21191503.4043”
UserApplicationName = “FAN COIL”

Register number = Address + 1

Reg num	Address Dec, [Hex]	Range	Description	Default
1	0, [0000]***	7...32°C	T1_RoomTemperature	°C
2	1, [0001]***	-40...89°C	T2_ChangeOverSensorTemperature	°C
3	2, [0002]***	-40...89°C	T3_IndoorCoilTemperature	°C
4	3, [0003]***	0...10000 mV	AI1_AnalogInput	mV
5	4, [0004]***	0...10000 mV	AI2_AnalogInput	mV
6	5, [0005]***	0...10000 mV	AO_CoolingOutput	0 mV
7	6, [0006]***	0...10000 mV	AO_HeatingOutput	0 mV
8	7, [0007]	0-Off, 1-On	DIPSW21_TestingOccupancySensor Time = 20 sec to goto Unoccupied	
9	8, [0008]	0-Off, 1-On	DIPSW23_START_STOP	
10	9, [0009]	0-Off, 1-On	DI1	
11	10, [000A]	0-Off, 1-On	DI2	
12	11, [000B]	0-Off, 1-On	DI3	
13	12, [000C]	0-Off, 1-On	DI4	
14	13, [000D]	0-Off, 1-On	DI5	
15	14, [000E]	0-Off, 1-On	DI6	
16	15, [000F]	0-Off, 1-On	DI7	
17	16, [0010]	0-Off, 1-On	DI8_OccupancySensor	
18	17, [0011]	0-Off, 1-On	DO5_HEAT1	0 - Off
19	18, [0012]	0-Off, 1-On	DO4_COOL1	0 - Off
20	19, [0013]	0-Off, 1-On	DO8_FAN_LOW	0 - Off
21	20, [0014]	0-Off, 1-On	DO7_FAN_MEDIUM	0 - Off
22	21, [0015]	0-Off, 1-On	DO6_FAN_HIGH	0 - Off
23	22, [0016]	0-Off, 1-On	OnOff	0 - Off (W)
24	23, [0017]	1-Celsius, 0-Fahrenheit	Celsius	1 – Celsius (R)
25	24, [0018]	0-Off, 1-On	AutoFanInCool	0 – Off (W)
26	25, [0019]	0-Off, 1-On	AutoFanInHeat	1 – On (W)
27	26, [001A]	0-Off, 1-Unoccupancy	UnOccupancy	0 – Off (R)
28	27, [001B]	0-Enable, 1-Disable	DisableOccupancySensor	0 – Enable (W)
29	28, [001C]	0-Off, 1-Restore	RestoreDefault	0 – Off (W)
30	29, [001D]	0-Off, 1-Lock	LockRoomModuleOnOff	0 – Off (W)
31	30, [001E]	0-Off, 1-Lock	LockRoomModule	0 – Off (W)
32	31, [001F]	0-Off, 1-Lock	LockRoomModuleMode	0 – Off (W)

Reg num	Address Dec, [Hex]	Range	Description	Default
33	32, [0020]	0-Off, 1-Lock	LockRoomModuleFanSpeed	0 – Off (W)
34	33, [0021]	0-Off, 1-Lock	LockRoomModuleSetPoint	0 – Off (W)
35	34, [0022]	0-Off, 1-On	DI1_Polarity	0 (W)
36	35, [0023]	0-Off, 1-On	DI2_Polarity	0 (W)
37	36, [0024]	0-Off, 1-On	DI3_Polarity	0 (W)
38	37, [0025]	0-Off, 1-On	DI4_Polarity	0 (W)
39	38, [0026]	0-Off, 1-On	DI5_Polarity	0 (W)
40	39, [0027]	0-Off, 1-On	DI6_Polarity	0 (W)
41	40, [0028]	0-Off, 1-On	DI7_Polarity	0 (W)
42	41, [0029]	0-Off, 1-On	DI8_OccupancySensor_Polarity	0 (W)
43	42, [002A]	0...3	Mode 0-FanOnly; 1-Cool; 2-Heat; 3-AutoChange	1 - Cool (W)
44	43, [002B]	0...3	FanSpeed 0-AutoSpeed; 1-Low; 2-Medium; 3-High	1 – Low (W)
45	44, [002C]	10...30°C	SetPoint	22°C (W)
46	45, [002D]	10...30°C	SetPointLimitCool	10°C (W)
47	46, [002E]	10...30°C	SetPointLimitHeat	30°C (W)
48	47, [002F]	0...30°C	SetPointEffective	22°C (W)
49	48, [0030]	-6...6°C	ReturnAirSensorCalibration	0°C (W)
50	49, [0031]	0...5°C	DeadZoneForCool	1°C (W)
51	50, [0032]	0...5°C	DeadZoneForHeat	1°C (W)
52	51, [0033]	1...100 sec	CoolOutputsThresholdTime	60 sec (W)
53	52, [0034]	1...10°C	CoolProportionalBand	2°C (W)
54	53, [0035]	0…600 sec	CoolIntegralTime	240 sec (W)
55	54, [0036]	0…100%	CoolIntegralValue	10% (W)
56	55, [0037]	0	Reserve	0 (R)
57	56, [0038]***	0...100%	COOL_Demand	0% (R) ***
58	57, [0039]	0...100%	CoolProportionalLowLimit	0% (W)
59	58, [003A]	0...100%	CoolProportionalHighLimit	100% (W)
60	59, [003B]	1...100 sec	HeatOutputsThresholdTime	60 sec (W)
61	60, [003C]	1...10°C	HeatProportionalBand	2°C (W)
62	61, [003D]	0…600 sec	HeatIntegralTime	240sec (W)
63	62, [003E]	0…100%	HeatIntegralValue	10% (W)
64	63, [003F]	0	Reserve	0 (R)
65	64, [0040]***	0...100%	HEAT_Demand	0% (R)***
66	65, [0041]	0...100%	HeatProportionalLowLimit	0% (W)
67	66, [0042]	0...100%	HeatProportionalHighLimit	100% (W)
68	67, [0043]	0	Reserve	0 (R)

Reg num	Address Dec, [Hex]	Range	Description	Default
69	68, [0044]	0	Reserve	0 (R)
70	69, [0045]	0	Reserve	0 (R)
71	70, [0046]	0...300 sec	CoolFanOnDelay	0 sec (W)
72	71, [0047]	0...300 sec	CoolFanOffDelay	0 sec (W)
73	72, [0048]	0	Reserve	0 (R)
74	73, [0049]	0...300 sec	HeatFanOffDelay	30 sec (W)
75	74, [004A]	0...3600 sec	TimeSwitchingToUnOccupiedMode	1200 sec (W)
76	75, [004B]	0	Reserve	0 (R)
77	76, [004C]	0...3	UnOccupancyModeSelect 0-On/Off; 1-Start/Stop; 2—not in use; 3-Economy	0 – On/Off (W)
78	77, [004D]	0...100%	UnOccupancyTimeAction	50% (W)
79	78, [004E]	0...10°C	UnOccupancyChangeSetpoint	0°C (W)
80	79, [004F]	0 – 4-pipe 1 – 2-pipe	DIPSW22_2PIPE_Enable	0 – 4-pipe
81	80, [0050]	0…5000 ppm	CO2_FromPanel	0 ppm (R)
82	81, [0051]	0…5000 ppm	CO2_MinimumValue	0 ppm (W)
83	82, [0052]	0…5000 ppm	CO2_MaximumValue	2500 ppm (W)
84	83, [0053]	0…5000 ppm	CO2_EffectiveValue CO2_EffectiveValue = CO2_FromPanel if CO2_FromNetwork = 0. CO2_EffectiveValue = CO2_FromNetwork if CO2_FromNetwork > 0.	0 ppm (R)
85	84, [0054]	0 - No, 1 - Alarm	CO2_Alarm 0 – No alarm. 1- Alarm (CO2 lower than CO2_MinimumValue or higher than CO2_MaximumValue)	0 (R)
86	85, [0055]	0…5000 ppm	CO2_FromNetwork	0 ppm (W)
87	86, [0056]	0…100%	HumidityFromPanel	0%
88	87, [0057]	0…100%	HumidityMinimumValue	20% (W)
89	88, [0058]	0…100%	Humidity Maximum Value	90% (W)
90	89, [0059]	0…100%	HumidityEffectiveValue	0% (R)
91	90, [005A]	0 - No, 1 - Alarm	HumidityAlarm	0 – No (R)
92	91, [005B]	0…50%	CoolProportionalLimitOn	40% (W)
93	92, [005C]	0…20%	CoolProportionalLimitOff	10% (W)
94	93, [005D]	0…50%	HeatProportionalLimitOn	40% (W)
95	94, [005E]	0…20%	HeatProportionalLimitOff	10% (W)
96	95, [005F]	0 -Disable,	PI_Enable	0 – Disable (W)

Reg num	Address Dec, [Hex]	Range	Description	Default
		1 - Enable		
97	96, [0060]	0…100%	Heater1_CutIn (% of HeatDemand)	40% (W)
98	97, [0061]	0…100%	Heater1_CutOut (% of HeatDemand)	10% (W)
99	98, [0062]	0 – On/Off 1-Start/Stop	StartStop	0 – On/Off (W)
100	99, [0063]	0-9600, 1-19200, 2-38400	BaudRate	0 – 9600 (W)
101	100, [0064]*	0 – Off 1 – On	ViewFloatValue (active only for Registers with °C)	0 – Off (W)
102	101, [0065]	0…10 sec	PanelTimeChangeDisplay: 0 – Temperature indication only, 5 – 5 seconds humidity, 5 seconds temperature, 10 – Humidity indication only.	0 sec (W)
103	102, [0066]	0, 1	PanelTemperatureDisplay 0 – Only Setpoint indicates on Panel 1 – Ambient and Setpoint indicate	1 (W)
104	103, [0067]	0 - Disable , 1 - Enable	EnableOverrideInputOutput 1-Enable override for commissioning	0 – Disable (W)
105	104, [0068]	0…3	FanEffectiveValue: 0 – Off, 1 - Low, 2 - Medium, 3 - High	0 – Off (R)

***-writable only if the value of the Register 102 (“EnableOverrideInputOutput”) is equal to 1.

Attention! Writing to the Registers 57*** (“CoolDemand”) and 65*** (“HeatDemand”) could be used only for commissioning purpose. At the end of the commissioning procedure the technician must make “Restore Default” operation – write “1” to the Register 29 (“RestoreDefault”).

While the Register 101 ("ViewFloatValue") is "1", all the Registers of units °C are presented in format Integer (Real value * 10, Meitav-tec OEM "floating point" format).

Read value examples:

Register 1 "T1_RoomTemperature = 221" represents a real value = 22.1°C.

Register 45 "SetPoint = 150" represents a real value = 15.0°C.

Register 50 "DeadZoneForCool = 10" represents a value = 1 * 0.5 °C = ±0.5°C.

Write value examples:

To write 20°C to the "SetPoint", send value "200" to the Register 45.

To write 25.2°C to the "SetPointLimitHeat", send value "252" to the Register 47.

To write "±1.5°C" to the "DeadZoneForCool", send value = 3 * 10 = "30" to the Register 50