

AirLab Registers List

Register Address	Register Length	Register Name	Operation	Data Format	Description
0	4	MODBUS_SERIALNUMBER	03 Read Holding Registers (4x)	32 Bit Unsigned Integer LO_HI	Serial Number - 4 byte value. Read-only
4	2	MODBUS_VERSION_NUMBER_LO	03 Read Holding Registers (4x)	32 Bit Unsigned Integer LO_HI	Software Version - 2 byte value. Read-only
6	1	MODBUS_ADDRESS	03_06 Read Holding and Write Single	8 Bit Unsigned Integer	Modbus device address
7	1	MODBUS_PRODUCT_MODEL	03 Read Holding Registers (4x)	16 Bit Unsigned Integer	Product Model. This is a read-only register that is used by the microcontroller to determine the product
8	1	MODBUS_HARDWARE_REV	03 Read Holding Registers (4x)	16 Bit Unsigned Integer	Hardware Version
11	1	MODBUS_ADDRESS_PLUG_N_PLAY	03_06 Read Holding and Write Single	16 Bit Unsigned Integer	
15	1	MODBUS_BAUDRATE	03 Read Holding Registers (4x)	16 Bit Unsigned Integer	0=9600,1=19200,2=38400,3=57600,4=115200,5=76800
16	1	MODBUS_UPDATE_STATUS	03_06 Read Holding and Write Single	16 Bit Unsigned Integer	Firmware Update Register, used to show the status of firmware updates.Writing 143 sets the config back to out of the box except for Modbus ID and baud rate. Write 159 to fix the current config as the user defaults, this is done automatically by T3000
21	1	MODBUS_BACNET_SWITCH	03_06 Read Holding and Write Single	8 Bit Unsigned Integer	Protocol setting , 0 = Modbus , 1 = BACnet
22	1	MODBUS_RTU_PARITY	03_06 Read Holding and Write Single	8 Bit Unsigned Integer	0 = None Parity , 1= Odd Parity , 2=Even Parity
23	1	MODBUS_RTU_STOP_BIT	03_06 Read Holding and Write Single	8 Bit Unsigned Integer	0 = 1 stop bit , 1 = 0.5 stop bit , 2 = 2 stop bit ,3 = 1.5 stop bit
104	1	DEGC_OR_F	03_06 Read Holding and Write Single	8 Bit Unsigned Integer	Temperature units , 0 = DegC, 1 = DegF
121	1	MODBUS_TEMPERATURE	03_06 Read Holding and Write Single	Floating LO_HI/10	TEMPERATURE reading in DegC or F from the sensor
139	1	MODBUS_CO2_SENSOR	03_06 Read Holding and Write Single	16 Bit Unsigned Integer	CO2 value ,(Unit:ppm)
140	1	MODBUS_HUMIDITY_SENSOR	03_06 Read Holding and Write Single	16 Bit Unsigned Integer	Relative humidity (%)
142	1	MODBUS_FILTER	03_06 Read Holding and Write Single	16 Bit Unsigned Integer	Temperature filter
151	1	MODBUS_CO2_FILTER	03_06 Read Holding and Write Single	16 Bit Unsigned Integer	CO2 filer
152	1	MODBUS_HUMIDITY_FILTER	03_06 Read Holding and Write Single	16 Bit Unsigned Integer	HUM filer
153	1	MODBUS_TEMPERATURE_CALIBRATION_DATA	03_06 Read Holding and Write Single	16 Bit Unsigned Integer	temperature calibration offset
434	1	MODBUS_LCD_BACKLIGHT_TURN_ON_TIME	03_06 Read Holding and Write Single	8 Bit Unsigned Integer	Backlight ON timer ,Valid Value 0-255 ,Unit: minute , 0 = always OFF , 255=always ON, 1-254: Backlight on timer left
612	1	MODBUS_CO2_CALIBRATION_OFFSET	03_06 Read Holding and Write Single	16 Bit Unsigned Integer	CO2 CALIBRATION OFFSET
613	1	MODBUS_SOUND_TRIGGER VALUE	03_06 Read Holding and Write Single	16 Bit Unsigned Integer	SOUND TRIGGER VALUE
614	1	MODBUS_SOUND_TIMER	03_06 Read Holding and Write Single	16 Bit Unsigned Integer	SOUND TIMER (Unit:minute)
615	1	MODBUS_SOUND_ALARM_ON	03 Read Holding Registers (4x)	16 Bit Unsigned Integer	SOUND ALARM 1:ON , 0:OFF
616	1	MODBUS_SOUND_TIME_LEFT	03 Read Holding Registers (4x)	16 Bit Unsigned Integer	SOUND ALARM ON TIME LEFT
617	1	MODBUS_LIGHT_TRIGGER VALUE	03_06 Read Holding and Write Single	16 Bit Unsigned Integer	LIGHT TRIGGER VALUE
618	1	MODBUS_LIGHT_TIMER	03_06 Read Holding and Write Single	16 Bit Unsigned Integer	LIGHT TIMER (Unit:minute)
619	1	MODBUS_LIGHT_ALARM_ON	03 Read Holding Registers (4x)	16 Bit Unsigned Integer	LIGHT ALARM 1: ON 0:OFF
620	1	MODBUS_LIGHT_TIME_LEFT	03 Read Holding Registers (4x)	16 Bit Unsigned Integer	LIGHT ALARM ON TIME LEFT
621	1	MODBUS_CO2_TRIGGER VALUE	03_06 Read Holding and Write Single	16 Bit Unsigned Integer	CO2 TRIGGER VALUE
622	1	MODBUS_CO2_TIMER	03_06 Read Holding and Write Single	16 Bit Unsigned Integer	CO2 TIMER (Unit:minute)
623	1	MODBUS_CO2_ALARM_ON	03 Read Holding Registers (4x)	16 Bit Unsigned Integer	CO2_ALARM 1:ON , 0:OFF
624	1	MODBUS_CO2_TIME_LEFT	03 Read Holding Registers (4x)	16 Bit Unsigned Integer	CO2 ALARM ON TIME LEFT
628	1	MODBUS_LIGHT_SENSOR	03 Read Holding Registers (4x)	16 Bit Unsigned Integer	value of light sensor,(Unit:lux)
629	1	MODBUS_PIR_SELECT_ENABLE	03_06 Read Holding and Write Single	16 Bit Unsigned Integer	PIR sensor select 1=PIR sensor enable 0=PIR sensor disable
630	1	MODBUS_PIR_REAL_VALUE	03 Read Holding Registers (4x)	16 Bit Unsigned Integer	PIR sensor REAL value ,
631	1	MODBUS_PIR_THRESHOLD	03_06 Read Holding and Write Single	16 Bit Unsigned Integer	PIR sensor ZERO value ,Stable ADC reference value when it is not triggered .
633	1	MODBUS_PIR_TRIGGER	03_06 Read Holding and Write Single	16 Bit Unsigned Integer	OCC_TRIGGER value = Absolute(REAL value - ZERO value) , set threshold for pir sensor, default:30
634	1	MODBUS_PIR_TRIGGER_TIMER	03_06 Read Holding and Write Single	16 Bit Unsigned Integer	OCC_TRIGGER TIMER(Unit:minute)
635	1	MODBUS_PIR_ALARM_ON	03 Read Holding Registers (4x)	16 Bit Unsigned Integer	1 :ALARM ON , 0 : ALARM OFF
636	1	MODBUS_PIR_TIME_LEFT	03 Read Holding Registers (4x)	16 Bit Unsigned Integer	ALARM ON TIME LEFT
736	1	MODBUS_PIR_STATUS	03_06 Read Holding and Write Single	16 Bit Unsigned Integer	1=occupied, 0=unoccupied
760	1	MODBUS_PM1.0_WEIGHT_VALUE	03 Read Holding Registers (4x)	16 Bit Unsigned Integer	PM1.0 real value, unit : ug/m ³
761	1	MODBUS_PM2.5_WEIGHT_VALUE	03 Read Holding Registers (4x)	16 Bit Unsigned Integer	PM2.5 real value, unit : ug/m ³
762	1	MODBUS_PM4.0_WEIGHT_VALUE	03 Read Holding Registers (4x)	16 Bit Unsigned Integer	PM4.0 real value, unit : ug/m ³
763	1	MODBUS_PM10_WEIGHT_VALUE	03 Read Holding Registers (4x)	16 Bit Unsigned Integer	PM10 real value, unit : ug/m ³
764	1	MODBUS_PM0.5_NUMBER_VALUE	03 Read Holding Registers (4x)	16 Bit Unsigned Integer	PM0.5 real value, unit number
765	1	MODBUS_PM1.0_NUMBER_VALUE	03 Read Holding Registers (4x)	16 Bit Unsigned Integer	PM1.0 real value, unit number
766	1	MODBUS_PM2.5_NUMBER_VALUE	03 Read Holding Registers (4x)	16 Bit Unsigned Integer	PM2.5 real value, unit number
767	1	MODBUS_PM4.0_NUMBER_VALUE	03 Read Holding Registers (4x)	16 Bit Unsigned Integer	PM4.0 real value, unit number
768	1	MODBUS_PM10_NUMBER_VALUE	03 Read Holding Registers (4x)	16 Bit Unsigned Integer	PM10 real value, unit number
769	1	MODBUS_HUM_CALIBRATION_DATA	03_06 Read Holding and Write Single	16 Bit Unsigned Integer	Humidity calibration offset
988	1	MODBUS_VOC_SENSIRION_VALUE	03 Read Holding Registers (4x)	16 Bit Unsigned Integer	Ivoc sensor real value,(Unit:ppb)
1020	1	CO2_SENSOR_TURN_ON_TIME	03 Read Holding Registers (4x)	8 Bit Unsigned Integer	CO2_TURN_ON_TIME
1021	1	CO2_SENSOR_TURN_OFF_TIME	03 Read Holding Registers (4x)	8 Bit Unsigned Integer	CO2_TURN_OFF_TIME
1022	1	PM_SENSOR_TURN_ON_TIME	03 Read Holding Registers (4x)	8 Bit Unsigned Integer	PM_TURN_ON_TIME

1023	1	PM_SENSOR_TURN_OFF_TIME	03 Read Holding Registers (4x)	8 Bit Unsigned Integer	PM_TURN_OFF_TIME
1951	1	MODBUS_CO2_FORCED_RE-CALIBRATION	03_06 Read Holding and Write Single	16 Bit Unsigned Integer	Locate the device in an environment with air having a stable CO2 concentration in the range of 400 ppm to 2000 ppm. 1. Setting and controlling a known CO2 concentration in a sealed environment with the set CO2concentration acting as the reference value for FRC . 2.Fresh air from the outside can be used as a reference. Outside air typically has a CO2 concentration of 400 ppm . expose the device to outside air, e.g. by placing it close to an open window or outside. Direct sun light, extreme temperatures, and strong air flow have to be prevented,After 5 minutes, apply FRC with the reference value 400 ppm .
2001	1	MODBUS_WIFI_MODE	03_06 Read Holding and Write Single	8 Bit Unsigned Integer	WiFi IP MODE , 0-DHCP,1-STATIC
2004	1	MODBUS_WIFI_MODBUS_PORT	03_06 Read Holding and Write Single	16 Bit Unsigned Integer	WiFi_MODBUS_PORT ,Default value :502
2005	1	MODBUS_WIFI_BACNET_PORT	03_06 Read Holding and Write Single	16 Bit Unsigned Integer	BACnet PORT , Default value :47808
2010	32	MODBUS_WIFI_SSID	03 Read Holding Registers (4x)	16 Bit Unsigned Integer	WiFi_SSID
2042	16	MODBUS_WIFI_PASSWORD	03 Read Holding Registers (4x)	16 Bit Unsigned Integer	WiFi_PASSWORD
2058	1	MODBUS_WIFI_IP_ADDRESS_1	03_06 Read Holding and Write Single	8 Bit Unsigned Integer	IP_ADDRESS
2059	1	MODBUS_WIFI_IP_ADDRESS_2	03_06 Read Holding and Write Single	8 Bit Unsigned Integer	IP_ADDRESS
2060	1	MODBUS_WIFI_IP_ADDRESS_3	03_06 Read Holding and Write Single	8 Bit Unsigned Integer	IP_ADDRESS
2061	1	MODBUS_WIFI_IP_ADDRESS_4	03_06 Read Holding and Write Single	8 Bit Unsigned Integer	IP_ADDRESS
2062	1	MODBUS_WIFI_SUBNET_MASK_1	03_06 Read Holding and Write Single	8 Bit Unsigned Integer	SUBNET_MASK
2063	1	MODBUS_WIFI_SUBNET_MASK_2	03_06 Read Holding and Write Single	8 Bit Unsigned Integer	SUBNET_MASK
2064	1	MODBUS_WIFI_SUBNET_MASK_3	03_06 Read Holding and Write Single	8 Bit Unsigned Integer	SUBNET_MASK
2065	1	MODBUS_WIFI_SUBNET_MASK_4	03_06 Read Holding and Write Single	8 Bit Unsigned Integer	SUBNET_MASK
2066	1	MODBUS_WIFI_GATEWAY_1	03_06 Read Holding and Write Single	8 Bit Unsigned Integer	GATEWAY
2067	1	MODBUS_WIFI_GATEWAY_2	03_06 Read Holding and Write Single	8 Bit Unsigned Integer	GATEWAY
2068	1	MODBUS_WIFI_GATEWAY_3	03_06 Read Holding and Write Single	8 Bit Unsigned Integer	GATEWAY
2069	1	MODBUS_WIFI_GATEWAY_4	03_06 Read Holding and Write Single	8 Bit Unsigned Integer	GATEWAY
2070	1	MODBUS_WIFI_MAC_ADDRESS_1	03 Read Holding Registers (4x)	8 Bit Unsigned Integer	MAC_ADDRESS
2071	1	MODBUS_WIFI_MAC_ADDRESS_2	03 Read Holding Registers (4x)	8 Bit Unsigned Integer	MAC_ADDRESS
2072	1	MODBUS_WIFI_MAC_ADDRESS_3	03 Read Holding Registers (4x)	8 Bit Unsigned Integer	MAC_ADDRESS
2073	1	MODBUS_WIFI_MAC_ADDRESS_4	03 Read Holding Registers (4x)	8 Bit Unsigned Integer	MAC_ADDRESS
2074	1	MODBUS_WIFI_MAC_ADDRESS_5	03 Read Holding Registers (4x)	8 Bit Unsigned Integer	MAC_ADDRESS
2075	1	MODBUS_WIFI_MAC_ADDRESS_6	03 Read Holding Registers (4x)	8 Bit Unsigned Integer	MAC_ADDRESS

AirLab Objects List

Objects	Description
Analog Inut 1	Temperature (°C or °F)
Analog Inut 2	Relative Humidity (%)
Analog Inut 3	CO2 (PPM)
Analog Inut 4	TVOC (PPB)
Analog Inut 5	PM1.0 ,Mass concentration (ug/m ³)
Analog Inut 6	PM2.5 ,Mass concentration (ug/m ³)
Analog Inut 7	PM4 ,Mass concentration (ug/m ³)
Analog Inut 8	PM10 ,Mass concentration (ug/m ³)
Analog Inut 9	PM0.5 ,Number concentration (1/cm ³)
Analog Inut 10	PM1.0 ,Number concentration (1/cm ³)
Analog Inut 11	PM2.5,Number concentration (1/cm ³)
Analog Inut 12	PM4 , Number concentration (1/cm ³)
Analog Inut 13	PM10 ,Number concentration (1/cm ³)
Analog Inut 15	Sound (DB)
Analog Inut 16	Light (LX)
Analog Inut 17	OCC Status(1=occupied, 0=unoccupied)
Variable1	Uart BaudRate, 96=9600, 192=19200, 384=38400 , 576=57600, 1152=115200
Variable2	Serial Number
Variable3	Protocol setting , 0 = Modbus , 1 = BACnet
Variable4	Instance number
Variable5	Temperature Unit, 0=°C ,1=°F
Variable6	SOUND TRIGGER VALUE
Variable7	SOUND TIMER (Unit:minute)
Variable8	LIGHT TRIGGER VALUE
Variable9	LIGHT TIMER (Unit:minute)
Variable10	OCC_TRIGGER value
Variable11	OCC_TRIGGER (Unit:minute)
Variable12	CO2 TRIGGER VALUE
Variable13	CO2 TIMER (Unit:minute)