



Airobot ventilation units Modbus configuration

Version 1.0

Overview

Airobot ventilation units can be connected to home automation systems using ModBus TCP protocol.

Modbus TCP protocol works in local network. Airobot ventilation devices are equipped with ethernet functionality in standard. Ethernet cable must be connected to the RJ45 port on the device.

By default ModBus is disabled. To enable ModBus go to MENU – SYSTEM – MODBUS in LCD controller:

1. Set IP address according to your local network, default is 192.168.1.152 and port 502. Press Set Ip in menu.
2. After IP address is set, set ModBus to ON to enable it.
3. Device is rebooting once again and ModBus should be set up now.

Read data

If data is more than 16bit then it will divide into two Modbus register.

Modbus register	Description	Type	Min	Max	Unit
1000	Device firmware version	R	256	999	
1001	Extract air temperature	R	-999	999	°C
1002	Supply air temperature	R	-999	999	°C
1003	Outside air temperature	R	-999	999	°C
1004	Exhaust air temperature	R	-999	999	°C
1005	Optional extra sensor temperature	R	-999	999	°C
1010	Extract air humidity	R	-999	999	RH %
1011	Supply air humidity	R	-999	999	RH %
1012	Outside air humidity	R	-999	999	RH %
1013	Exhaust air humidity	R	-999	999	RH %
1014	Optional extra sensor humidity	R	-999	999	RH %
1020	Carbon dioxide level	R	0	2000	PPM
1030	Outside air filter differential pressure	R	0	2000	Pa
1031	Heat exchanger differential pressure	R	0	2000	Pa
1040	Supply fan level	R	0	10	
1041	Extract fan level	R	0	10	
1042	Supply fan pulses per minute	R	0	9999	PPM
1043	Extract fan pulses per minute	R	0	9999	PPM
1050	Device working time	R	0	2147483647	ms
1052	Preheater working time	R	0	2147483647	ms
1054	Postheater working time	R	0	2147483647	ms
1056	External device working time (EXT1)	R	0	2147483647	ms
1070	Sum of flags	R	0	2147483647	

1100	Sum of errors	R	0	21474836 47	
	FIRE_ALARM = 1 FAN1_ERROR = 2 FAN2_ERROR = 4 SENSOR1_ERROR = 8 SENSOR2_ERROR = 16 SENSOR3_ERROR = 32 SENSOR4_ERROR = 64 SENSOR_CO2_ERROR = 128				

Read & write data

It is only allowed to set values in Min - > Max range, otherwise it might cause unexpected behaviour or damage the device.

Modbus register	Description	Type	Min	Max	Default value
2000	Device working mode 1 – Automatic mode 2 – Manual mode 5 – Modbus mode	R/W	1	5	1
2001	Wish temperature	R/W	50	350	220
2002	Wish away temperature	R/W	50	350	220
2010	Wish humidity	R/W	50	950	600
2020	Wish CO2 level	R/W	450	2000	800
2030	Manual mode fan working level	R/W	0	10	5
2031	Away mode fan working level	R/W	0	10	5
2032	Fireplace mode fan working level	R/W	0	10	5
2040	Auto mode fan working maximum level	R/W	5	10	8
2041	Auto mode fan working minimum level	R/W	1	4	3
2042	Fan minimum working pulses per minute (fan level 1)	R/W	800	1200	1000
2060	Fan1 and fan2 pulses per minute ratio (used for airflow balancing)	R/W	32 767	131 072	65536
2061	Fireplace mode Fan1 pulses per minute extra ratio	R/W	32 767	131 072	65536
2070	Power On / Off	R/W	0	1	1
2071	Bypass mode: 0 – OFF 1 – AUTO	R/W	0	1	1
2072	Boost mode 0 – OFF 1 – ON	R/W	0	1	0
2073	Fireplace mode 0 – OFF 1 – ON	R/W	0	1	0
2080	Boost mode timeout (seconds)	R/W	180	3600	1800
2081	Fireplace mode timeout (seconds)	R/W	180	3600	1800
2090	Connection problem icon 0 – OFF 1 – ON	R/W	0	1	1

2091	Fireplace mode hidden or shown 0 – HIDDEN 1 – SHOWN	R/W	0	1	1
2092	Postheater 0 – OFF 1 – ON	R/W	0	1	0
2093	Preheater (frost protection) 0 – OFF 1 – ON	R/W	0	1	1
2094	Filter reminder 0 – no action needed 1 – filter change needed	R/W	0	1	0
2095	External heating 0 – OFF 1 – ON	R/W	0	1	0
2096	External cooling 0 – OFF 1 – ON	R/W	0	1	0
2101	Energy saving mode 0 – OFF 1 – ON	R/W	0	1	0
2102	Energy saving mode 1 - AUTO	R/W	0	1	1
2110	Heat exchanger type 0 – HRV 1 – ERV	R/W	0	1	0
2112	Filter reminder interval (hours)	R/W	720	8760	4320
2113	Filter reminder time elapsed Set value 0 to reset filter timer	R/W	0	0	0