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MyVallox
Modbus configuration

Technical instructions

MyVallox ventilation units can be controlled with Modbus RTU-compatible building automation systems. Up to 32 MyVallox ventilation units can be connected in the same Modbus line. Through a building automation system it is possible to control the ventilation unit, it e.g. read different sensor values and change the status of the ventilation unit.

MODBUS SETTINGS

If the ventilation unit is connected to e.g. a building automation system through Modbus line, the following Modbus settings must be given:

- Ventilation unit Modbus address
- Modbus baud rate
- Modbus parity
- Modbus stop-bit

This document describes how to make those settings using either the MyVallox Control control panel or the Web interface. With these instructions you can also set individual settings, such as the Modbus address.

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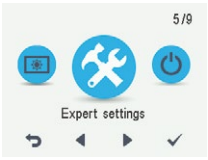
MODBUS SETTINGS USING MYVALLOX CONTROL -CONTROL PANEL

To set the Modbus settings, proceed as follows:

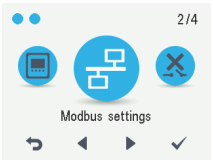
1 Select Settings

2 Use the arrow buttons and select Expert settings:



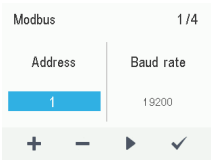
3 Press the OK button:

4 Use the arrow buttons and select Modbus settings:



5 Press the OK button:

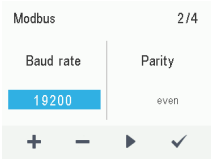
6 The Modbus 1/4 screen opens.



7 Set the Modbus address of the ventilation unit by using the Plus and Minus buttons. You can choose the address within the range 1 … 247.

8 Press the Right arrow button.

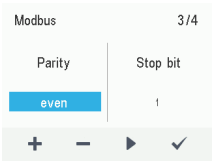
9 The Modbus 2/4 screen opens.



10 Set the Modbus Baud rate by using the Plus and Minus buttons. The options are 9600, 19200, 38400, 57600 or 115200.

11 Press the Right arrow button.

12 The Modbus 3/4 screen opens.

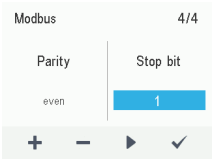


13 Set the Modbus Parity by using the Plus and Minus buttons. The options are:

- no — No parity
- even — Even parity
- odd — Odd parity

14 Press the Right arrow button.

15 The Modbus 4/4 screen opens.



16 Set the Modbus Stop bit by using the Plus and Minus buttons. The options are 1 or 2.

17 Press the OK button:

18 The Modbus settings are now complete.

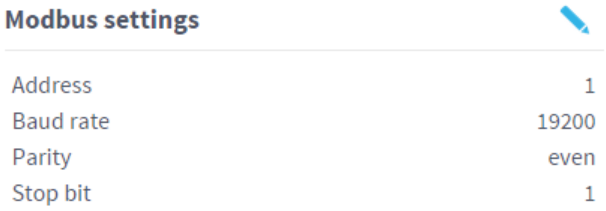
MODBUS SETTINGS USING THE WEB INTERFACE

You can also set the Modbus settings for the MyVallox ventilation unit through the Web interface. There are two options:

- MyVallox Home local network connection
- MyVallox Cloud cloud service

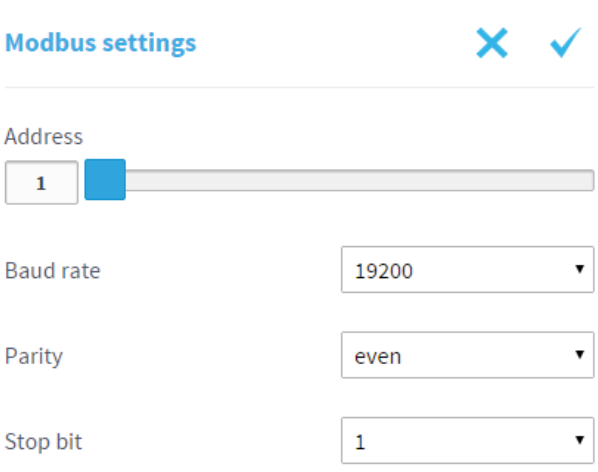
1 Select Expert settings.

2 Scroll the screen until you see the Modbus settings.



3 Press the Edit button:

4 The Modbus settings screen opens in the edit mode:



5 Set the Modbus address of the ventilation unit in the Address field. You can set the address by sliding the blue slider. You can choose the address within the range 1 … 247.

6 Select the Modbus connection speed in the Baud rate drop down menu. The options are 9600, 19200, 38400, 57600 or 115200.

7 Select the Modbus parity in the Parity drop down menu. The options are:

- no — No parity
- even — Even parity
- odd — Odd parity

8 Set the Modbus stop bit in the Stop bit field. The options are 1 or 2.

9 Press the OK button.

10 The Modbus settings are now complete.

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PROFILE PRIORITY

If more than one profiles are active at the same time, the higher-priority profile overrides any other profile. For example, if the Fireplace profile and the Boost profile are simultaneously active, the ventilation unit uses the Fireplace profile.

The profile priority order is:

1. Extra profile
2. Fireplace profile
3. Boost profile
4. At home/Away profile

MODBUS PARAMETERS

Function	Parameter	Register	Value	Definition
Reading the At home profile	CYC_STATE	4609	0	The value must be zero
	CYC_BOOST_TIMER	4612	0	The value must be zero
	CYC_FIREPLACE_TIMER	4613	0	The value must be zero
	CYC_EXTRA_TIMER	4614	0	The value must be zero
	When the value of all parameters is zero, the ventilation unit uses the At home profile			
Reading the Away profile	CYC_STATE	4609	1	Value must be one.
	CYC_BOOST_TIMER	4612	0	The value must be zero
	CYC_FIREPLACE_TIMER	4613	0	The value must be zero
	CYC_EXTRA_TIMER	4614	0	The value must be zero
	When the value of parameter CYC_STATE is one and the values of all other parameter are zero, the ventilation unit uses Away profile.			
Reading the Extra profile	CYC_EXTRA_TIMER	4614	X	The value must not equal zero. The value indicates the activation time of the Extra profile in minutes.
Reading the Fireplace profile	CYC_FIREPLACE_TIMER	4613	X	The value cannot equal zero. The value indicates the activation time of the Fireplace profile in minutes.
	CYC_EXTRA_TIMER	4614	0	The value must be zero
Reading the Boost profile	CYC_BOOST_TIMER	4612	X	The value cannot equal zero. The value indicates the activation time of the Boost profile in minutes.
	CYC_FIREPLACE_TIMER	4613	0	The value must be zero
	CYC_EXTRA_TIMER	4614	0	The value must be zero
Setting At home profile	CYC_STATE	4609	0	Set the value to zero
	CYC_BOOST_TIMER	4612	0	Set the value to zero
	CYC_FIREPLACE_TIMER	4613	0	Set the value to zero
	CYC_EXTRA_TIMER	4614	0	Set the value to zero
	To make the ventilation unit use the At home profile, set the values of all four parameters to zero.			
Setting the Away profile	CYC_STATE	4609	1	Set the value to one.
	CYC_BOOST_TIMER	4612	0	Set the value to zero
	CYC_FIREPLACE_TIMER	4613	0	Set the value to zero
	CYC_EXTRA_TIMER	4614	0	Set the value to zero
	To make the ventilation unit use the Away profile, set the value of parameter CYC_STATE to one, and the values of the other parameters to zero.			
Setting the Fireplace profile	CYC_FIREPLACE_TIMER	4613	X	To make the ventilation unit use the Fireplace profile, set the value to the desired duration of the profile in minutes. If the value is set to 65535, the ventilation unit uses the Fireplace profile at all times.
	CYC_EXTRA_TIMER	4614	0	
Setting the Boost profile	CYC_BOOST_TIMER	4612	15	To make the ventilation unit use the Boost profile, set the value to the desired duration of the profile in minutes. If the value is set to 65535, the ventilation unit uses the Boost profile at all times.
	CYC_FIREPLACE_TIMER	4613	0	The value must be zero
	CYC_EXTRA_TIMER	4614	0	The value must be zero

Function	Parameter	Register	Value	Definition
Reading the fan speed	CYC_FAN_SPEED	4353	50	The parameter value is the fan speed of the ventilation unit in percent (i.e. in the range of 0 … 100).
Reading the speed of the supply air fan	CYC_SUPP_FAN_SPEED	4362	1000	The value of the parameter is the RPM of the fan
Reading the speed of the extraction fan	CYC_EXTR_FAN_SPEED	4361	1000	The value of the parameter is the RPM of the fan
Reading the temperature information	CYC_TEMP_EXTRACT_AIR	4354	28815	The values are the airflow temperatures in cK. Conversion to the Celsius scale: °C=cK/100–273
	CYC_TEMP_EXHAUST_AIR	4355	28815	
	CYC_TEMP_OUTDOOR_AIR	4356	28815	
	CYC_TEMP_SUPPLY_CELL_AIR	4357	28815	
	CYC_TEMP_SUPPLY_AIR	4358	28815	
	CYC_TEMP_OPTIONAL_SENSOR	4390	28815	
Reading the maximum %RH value	CYC_RH_VALUE	4363	50	The value can vary between 0 and 100%. If the value is zero, the humidity sensor is not installed.
Reading the maximum CO_2 value	CYC_CO_2_VALUE	4364	500	The value in ppm is indicated by the CO_2 sensor. If the value is zero, the sensor is not installed.
Reading the heat recovery state	CYC_CELL_STATE	0		Heat recovery state of the ventilation machine: 0=heat recovery, 1=cool recovery, 2=override, 3=defrosting the heat recovery cell
Reading the limp mode	CYC_LIMP_MODE	4621	1	If the value is zero, the ventilation machine is in a normal state. It the value is one, the machine is in limp mode and turned off.
Setting the relay control	CYC_RELAY	20517	0	Value 0: Service reminder Value 1: Error data Value 2: Error data and Service reminder Value 3: Emergency stop Value 4: Bypass status Value 5: External liquid radiator control Value 6: Not in use
Setting the digital input 1 mode	CYC_DIGITAL_INPUT_1_MODE	20518	0	Value 0: Not in use Value 1: Fireplace mode Value 2: At home / Away profile Value 3: Fireplace profile Value 4: Emergency stop Value 5: Boost profile Value 6: Direct bypass control Value 7: Weekly clock enabled / disabled Value 8: Programmable input
Setting the digital input 2 mode	CYC_DIGITAL_INPUT_1_MODE	20519	0	Value 0: Disabled Value 1: Fireplace mode Value 2: At home / Away profile Value 3: Fireplace profile Value 4: Emergency stop Value 5: Boost profile Value 6: Direct bypass control Value 7: Weekly clock enabled / disabled Value 8: Programmable input

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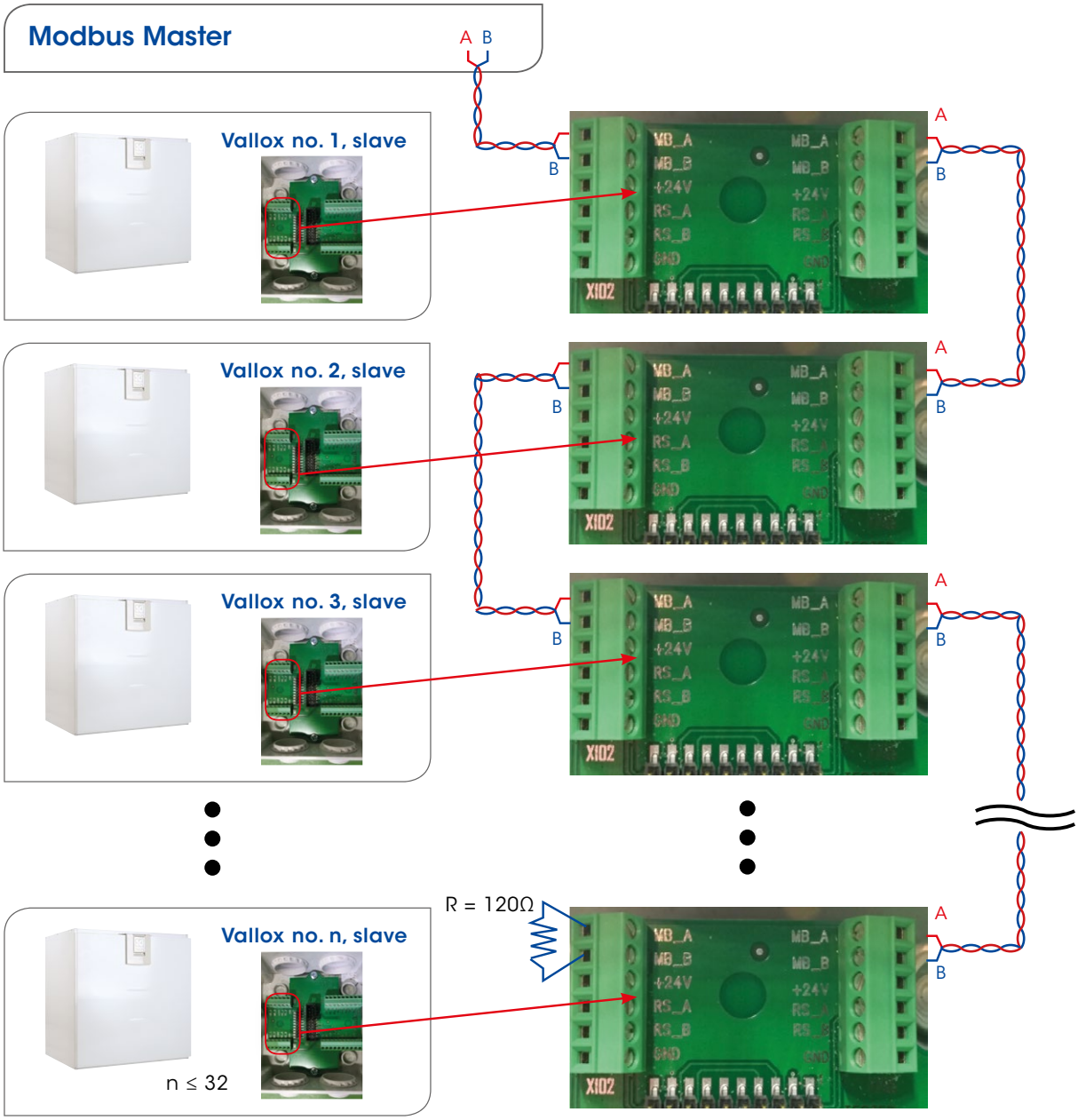
Function	Parameter	Register	Value	Definition
Setting the analogue input	CYC_ANALOG_INPUT_MODE	20520	0	Value 0: Not in use Value 1: Stop, Away, At home, Boost Value 3: Incoming air temperature control
Setting the access level	CYC_ACCESS_LEVEL	21764	0	Value 0: Extensive Value 1: Normal Value 3: Restricted
Changing the PIN code	CYC_USER_PASSWORD	21763	0	The value is the PIN code set for the machine. If the value is zero, the PIN code will not be requested.
	The value is BCD encrypted and must be entered/read backwards. E.g. pin 1234 = 0x4321			
Parental control	CYC_PARENTAL_CTRL_ENABLED	21765	0	Value 0: Parental control disabled Value 1: Parental control enabled
Restoring and saving the settings	CYC_COMMAND	4627	0	Set: Value 33: Restore factory settings Value 34: Save start-up settings Value 35: Restore start-up settings Value 36: Save user settings Value 37: Restore user settings
Reading/changing the information of the Away profile	CYC_AWAY_RH_CTRL_ENABLED	20499	0	%RH setting. In the Away profile: 1=enabled, 0=disabled
	CYC_AWAY_CO2_CTRL_ENABLED	20500	0	CO_2 setting. In the Away profile: 1=enabled, 0=disabled
	CYC_AWAY_SPEED_SETTING	20501	30	Fan speed % in the Away profile
	CYC_AWAY_AIR_TEMP_TARGET	20502	28815	Temperature setting in the Away profile in cK. Conversion to the Celsius scale:°C=cK/100–273
	These parameters can be set and their values can be read			
Reading/changing the information of the At home profile	CYC_HOME_RH_CTRL_ENABLED	20505	0	%RH setting. In the At home profile: 1=enabled, 0=disabled
	CYC_HOME_CO2_CTRL_ENABLED	20506	0	CO_2 setting. In the At home profile: 1=enabled, 0=disabled
	CYC_HOME_SPEED_SETTING	20507	50	Fan speed % in the At home profile
	CYC_HOME_AIR_TEMP_TARGET	20508	28815	Temperature setting in the At home profile in cK. Conversion to the Celsius scale: °C = cK/100–273
	These parameters can be set and their values can be read.			
Reading/changing the information of the Boost profile	CYC_BOOST_RH_CTRL_ENABLED	20511	0	% RH setting. In the Boost profile: 1=enabled, 0=disabled
	CYC_BOOST_CO2_CTRL_ENABLED	20512	0	CO_2 setting. In the Boost profile: 1=enabled, 0=disabled
	CYC_BOOST_SPEED_SETTING	20513	50	Fan speed % in the Boost profile
	CYC_BOOST_AIR_TEMP_TARGET	20514	28815	Temperature setting in the Boost profile in cK. Conversion to the Celsius scale: °C=cK/100–273
Type of heating adjustment	CYC_SUPPLY_HEATING_ADJUST_MODE	20549	0	Value 0: Incoming air Value 1: Exhaust air Value 2: Cooling
Last filter replacement	CYC_FILTER_CHANGED_DAY	20546	1	Date when the filter was last changed
	CYC_FILTER_CHANGED_MONTH	20547	1	Month when the filter was last changed
	CYC_FILTER_CHANGED_YEAR	20548	15	The two last digits of the year when the filter was last changed
	Set the details of the last filter replacement in the above parameters			
Time remaining until filter replacement	CYC_REMAINING_TIME_FOR_FILTER	4620	1	Indicates the time remaining in days until the next filter replacement. Only numerical parameters
Filter replacement interval	CYC_FILTER_CHANGE_INTERVAL	20537	1	Indicates the filter replacement interval in days

WIRING DIAGRAM



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