

# Airfi Modbus Register Map v. 2.7

All registers below are in the software version: airfi-sw 3.2.0

Default communication settings:

Modbus RTU 38400 8n1, ID1

Modbus TCP, standard port 502, UnitID 1

Registers can be read max 30 at a time

Input register, 16 bit integer. Read only.

Register	Name	Min	Max	Unit	Description
3x00001	Component ID	1	999		HW-version, 190 = 1.90 (/100)
3x00002	Application ID	1	999		SW-version, 190 = 1.90 (/100)
3x00003	Map version	1	99		Register map version
3x00004	T1, Outdoor temperature			°C	e.g. 23,2°C = 232
3x00005	T2, Supply (after Heat-Exchanger) temperature			°C	Optional, when used
3x00006	T3, Extract temperature			°C	
3x00007	T4, Exhaust temperature			°C	
3x00008	T5, Supply temperature			°C	
3x00009	T6, Water coil, freeze protection			°C	Only in water models
3x00010	RESERVED				
3x00011	RESERVED				
3x00012	RESERVED				
3x00013	AUX3 mode	0			AUX3 selection 0 = not in use 1 = switch mode 2 = transmitter mode 3 = filter guard mode
3x00014	AUX4 mode	0			
3x00015	AUX1/Fireplace/Pres.comp	0	1		0=OFF, 1=ON (forced function)
3x00016	Home/Away status	0	1		0=HOME, 1=AWAY
3x00017	Emergency Stop	0	1		0=OFF, 1=ON
3x00018	Freeze protection alarm	0	1		0=OFF, 1=ON (Water coils)

3x00019	Machine fault status	0	1		0=no fault, 1=active fault(s)
3x00020	RESERVED				
3x00021	RESERVED				
3x00022	RESERVED				
3x00023	Measured humidity	25	100	Rh%	(internal humidity value)
3x00024	Fan speed	0	5		speed 1-5
3x00025	Forced control	0	3		
3x00026	Direct control	0	1		0=OFF, 1=ON
3x00027	Direct control speed 0-100%	0	100	%	NOTE! Model 250: max. speed is 75%
3x00028	Temperature setpoint	0	260	x10C	
3x00029	AUX3 setpoint	0	x		Value according to selected device
3x00030	AUX4 setpoint	0	x		Value according to selected device
3x00031	Filter change interval	0	6		Times per year (default 0)
3x00032	Error-info	0	99		bitshift: E0 = 0x0000000000000001 = 1 E1 = 0x0000000000000010 = 2 E2 = 0x0000000000000100 = 4 E3 = 0x0000000000001000 = 8 E4 = 0x0000000000010000 = 16 E5 = 0x000000000100000 = 32 E6 = 0x000000001000000 = 64 E7 = 0x000000010000000 = 128 E8 = 0x000000100000000 = 256 E9 = 0x000001000000000 = 512

3x00033	AUX3 read value	0	x		Value according to selected device (RH, CO <sup>2</sup> , jne)
3x00034	AUX4 read value	0	x		Value according to selected device
3x00035	Constant pressure control Supply-alarm	0	9		0 = no alarm 1 = alarm, setpoint not entered
3x00036	Constant pressure control Extract -alarm	0	9		2 = alarm, deviation alarm 9 = alarm, possible malfunction
3x00037	Filter Guard alarm				0 = no alarm 1 = alarm – supply filter dirty 2 = alarm – extract filter dirty 3 = supply- and extract alarm 4 = Sensor fault, supply 5 = Sensor fault, poisto 6 = Sensor fault, supply + extract 7 = Inaccurate calibration
3x00038	AUX2 status	0	1		AUX2 status
3x00039	Fire danger alarm	0	1		1 if fire danger alarm is active. Otherwise 0.
3x00040	Kitchen hood status	0	1		0=Kitchen hood flap closed 1=Kitchen hood flap open
3x00041	S1 read value	0	x		Value according to selected device (RH, CO <sup>2</sup> , jne)
3x00042	Room sensor			°C	Temperature of seleted measurement data
3x00043	Post-heating control valve status (water model, only with electronic control valve	0	100		100 = 10.0,, 50 = 5.0, 0 = 0.0
3x00044	Defrost active	0	1		1 = active, 0 = not active

Holding register, 16 bit integer. Read/write.

Register	Name	Min	Max	Unit	Description
4x00001	Speed	0	5		Fan speed (0)1-5
4x00002	Forced control	0	3		0 = forced control off 1 = Emergency stop on 2 = Away mode on
4x00003	Direct control enabled	0	1		0 = disabled, 1 = enabled

4x00004	Direc control speed 0-100%	0	100	%	Extract fan + supply fan (difference set separately) NOTE! Model 250 max. speed is 75%.
4x00005	Temperature setpoint	50	260	x10C	Min 130 (13 °C) for water machines, min 50 (5 °C) for other machines Note! Decimal numbers are not supported! If you write e.g. 155, the decimal part disappears and the temperature setpoint becomes 15 °C.
4x00006	AUX3 setpoint	0	2000		Setpoint according to selected device
4x00007	AUX4 setpoint	0	2000		Setpoint according to selected device
4x00008	Filter change interval	0	6		Times per year (default 0)
4x00009	Constant pressure control mode	0	2		0 = disabled 1 = enabled, speed 1-2 2 = enabled, speed 1-5
4x00010	Supply fan direct control	25	100		speed%, range 25-100% NOTE! In Model 250 the max. speed is 75%.
4x00011	Extract fan direct control	25	100		speed%, range 25-100% NOTE! In Model 250 the max. speed is 75%.
4x00012	Home/Away mode	0	1		0=HOME, 1=AWAY
4x00013	CP: Supply, speed 1-setpoint	0	999	Pa	Constant pressure control, Supply, speed1 setpoint Setpoint 0-500 Pa
4x00014	CP: Supply, speed 2-setpoint	0	999	Pa	Constant pressure control, Supply, speed2 setpoint Setpoint 0-500 Pa
4x00015	CP: Supply, speed 3-setpoint	0	999	Pa	Constant pressure control, Supply, speed3 setpoint Setpoint 0-500 Pa
4x00016	CP: Supply, speed 4-setpoint	0	999	Pa	Constant pressure control, Supply, speed4 setpoint Setpoint 0-500 Pa

4x00017	CP: Supply, speed 5-setpoint	0	999	Pa	Constant pressure control, Supply, speed5 setpoint Setpoint 0-500 Pa
4x00018	CP: Extract, speed 1-setpoint	0	999	Pa	Constant pressure control, Extract, speed 1 setpoint Setpoint 0-500 Pa
4x00019	CP: Extract, speed 2-setpoint	0	999	Pa	Constant pressure control, Extract, speed2 setpoint Setpoint 0-500 Pa
4x00020	CP: Extract, speed 3-setpoint	0	999	Pa	Constant pressure control, Extract, speed3 setpoint Setpoint 0-500 Pa
4x00021	CP: Extract, speed 4-setpoint	0	999	Pa	Constant pressure control, Extract, speed4 setpoint Setpoint 0-500 Pa
4x00022	CP: Extract, speed 5-setpoint	0	999	Pa	Constant pressure control, Extract, speed5 setpoint Setpoint 0-500 Pa
4x00023	CP: deviation setpoint	5	300	Pa	Constant pressure deviation alarm setpoint factory setting: 10 Pa
4x00024	Filter guard mode	0	2		0 = disabled 1 = enabled 2 = calibration on (after which running)
4x00025	Filter guard: Supply contamination factor	15	30		Factor, 1,5...3,0, default 2,0 (x 10)
4x00026	Filter guard: Extract contamination factor	15	30		Factor, 1,5...3,0, default 2,0 (x 10)
4x00027	Critical alarm confirmation method (Emergency stop info, Fire danger alarm, In water models: water radiator freeze danger)	0	1		If 0: automatically returns when alarm info disappears. If 1: requires manual confirmation from modbus (4x00002 = 0)
4x00028	Humidity boost: transmitter control factor	10	100	%	Default 15%
4x00029	Humidity boost: transmitter deviation	1	5	%	Default 5%
4x00030	Fire danger: Supply temperature limit	0	99	C	0=off, default 50°C.
4x00031	Fire danger: Extract temperature limit	0	99	C	0=off, default 70°C.

4x00032	Post-ventilation time	0	10	min	Default 3 min. (only Model 250/350 electric)
4x00033	Alarm buzzer	0	1		1 = disabled. 0 = enabled.
4x00034	Filter change reminder	0	1		If the value is 1, the filter must be changed. Reset by writing 0.
4x00035	Supply fan speed, speed 1 setpoint	25	100	%	Supply fan speed when speed 1 is selected.
4x00036	Supply fan speed, speed 2 setpoint	25	100	%	Supply fan speed when speed 2 is selected.
4x00037	Supply fan speed, speed 3 setpoint	25	100	%	Supply fan speed when speed 3 is selected.
4x00038	Supply fan speed, speed 4 setpoint	25	100	%	Supply fan speed when speed 4 is selected.
4x00039	Supply fan speed, speed 5 setpoint	25	100	%	Supply fan speed when speed 5 is selected.
4x00040	Extract fan speed, speed 1 setpoint	25	100	%	Extract fan speed when speed 1 is selected.
4x00041	Extract fan speed, speed 2 setpoint	25	100	%	Extract fan speed, when speed 2 setpoint
4x00042	Extract fan speed, speed 3 setpoint	25	100	%	Extract fan speed, when speed 3 setpoint
4x00043	Extract fan speed, speed 4 setpoint	25	100	%	Extract fan speed, when speed 4 setpoint
4x00044	Extract fan speed, speed 5 setpoint	25	100	%	Extract fan speed, when speed 5 setpoint
4x00045	Separate supply fan values / common correction	0	1		0 = separate supply fan values, 1=common correction.
4x00046	Supply fan correction percentage	1	199	%	Supply fan correction percentage if common correction is selected. 100 means 0% correction percentage. 95 means -5% correction percentage. 105 means +5% correction percentage.
4x00047	Bypass set temperature	15	30	C	Bypass set temperature

4x00048	Bypass allowed outdoor lower limit	1	30	C	Bypass allowed outdoor lower limit. In water machines min limit 9 °C.
4x00049	Bypass delay	5	30	min	Bypass delay
4x00050	Supply air minimum temp.	10	25	C	Supply air minimum setting
4x00051	Boosted cooling allowed	0	1		0 = disabled 1 = enabled
4x00052	Temperature setpoint in away mode	50	260	x10C	
4x00053	Cooling mode temperature limit	10	25 (& 99)	C	99 = forced control via register 4x00055
4x00054	Preheating temperature limit	2	6 (& 99)	C	99 = forced control via register 4x00055 2-6 is a negative temperature limit written as a positive number (without minus).
4x00055	AUX2 forced control	0	1		0 = OFF 1 = ON
4x00056	Internal humidity transmitter mode	0	2		0 = switch mode 1 = transmitter mode 2 = disabled
4x00057	Sauna mode	0	1		0 = OFF 1 = ON
4x00058	AUX1/Pres.comp/Fireplace	0	1		0=OFF, 1=ON (forced function, max. runtime: 1h per on-command)
4x00059	Potentiometer menu lock	0	1		0 = menu enabled, 1 = menu usage locked