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Title	ModBus parameters list
Creation date	4/06/2014
Project	VNTLCD
File version	1.0.272
Repo. version	\$Rev: 1219 \$

Modification date	11/06/2014
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<i>Ver-Revision</i>	<i>Data</i>	<i>Description</i>
v1.0.272 / \$Rev: 1219 \$	28.03.2014	

## Communication parameters

*Table 1: Driver communication parameters*

<i>Name</i>	<i>Description</i>
Physical layer	RS485
Protocol	MODBUS-RTU
Transmission speed	[bps]
Parity	None
Data bits count	8
Stop bits count	1

*Table 2: ModBus function supported*

<i>Function name</i>	<i>Funkcion code</i>		<i>Description</i>
Read Holding Register	3	0x03	
Write Single Register	6	0x06	
Write Multiple Register	16	0x10	

**Holding Register**

Table 3: Holdings Register

Address	Parameter	Access	[bit]	Min	Max	Mul	Unit	Description
0x00	INT_SENS	R	[0-15]	-	-	1/16	C	Interior sense temperature
0x01	EXT_SENS	R	[0-15]	-	-	1/16	C	Exterior sense temperature
0x02	PROCESS_TEMP	R	[0-15]	-	-	1/16	C	Temperature charged to controller
0x03	DIG_OUT	R	[8-15]	0	1	1	-	Heating/cooling transmitter condition
	ANALOG_OUT		[1-7]	2	11	1/11	V	AOUT contact output voltage
0x04	CURR_SPEED	R	[8-15]	0	99	1	%	Fan current speed
	TAF_SET_TEMP		[0-7]	0	12	1	C	Antifreeze temperature
0x05	TZAD_SET_TEMP	R	[8-15]	5	50	1	C	Pre-set temperature
	CRS1_REG_AF		[0]	0	1	1	-	Antifreeze condition
	CRS1_REG_AFTm		[1]	0	1	1	-	Antifreeze condition 0 - Tm<TAF 1 - Tm>TAF
	CRS1_RUN		[2]	0	1	1	-	Device operating status 0 – STOP 1 – START
	CRS1_CAL_FORCE_RUN		[3]	0	1	1	-	Device operating status in programmer mode 0 - STOP 1 – START
	CRS1_MODE0		[4]	0	1	1	-	Control condition 0 – manual control 1 – automatic control
	CRS1_MODE1		[5]	0	1	1	-	Work mode condition 0:0 – heating 0:1 – ventilation 1:0 – cooling 1:1 – empty
	CRS1_T1		[7]	0	1	1	-	Chosen leading sense condition 0 – interior sense 1 – exterior sense
0x06	CRS2_REG	R	[8]	0	1	1	-	Fan condition in manual mode 0 – continuous mode 1 – thermostatic mode
	LCD_CONTRAST		[0-7]	1	8	1	-	Display contrast
0x07	LCD_BACKLIGHT	R	[0-15]	1	8	1/256	-	Display backlight
0x08	TZAD_MANUAL	R	[8-15]	5	50	1	C	Pre-set temperature in manual mode
	TZAD_AUTO		[0-7]	5	50	1	C	Pre-set temperature in automatic mode
0x09	VSPEED_HI	R	[8-15]	30	99	1	%	Fan speed upper limit
	VSPEED_LO		[0-7]	30	99		%	Fan speed upper limit
0x0A	ALARM_ID	R	[8-15]	0	1	1	-	Device internal error alarms
	VSPEED_CORR		[0-7]	0	30	1	%	Fan speed correction
0x0B	TEMP_CORR	R	[0-15]	-9	9	1/16	C	Exterior sense temperature correction
0x0C	PLANT_COEFF	R	[0-15]	1	5	1	-	Temperature regulator condition
0x0D	VSPEED_MANUAL	R	[8-15]	0	99	1	%	Fan speed in manual mode
	VSPEED_AUTO		[0-7]	0	99	1	%	Fan speed in automatic mode
0x0E	VSPEED_AF	R	[8-15]	0	99	1	%	Fan speed during antifreeze mode on
0x0F	CRS3_REG	R	[8-10]	0	1	1	-	Programmer condition 0:0:0 - OFF; 0:0:1 - 7d; 0:1:0 - 5d+2d; 0:1:1 - 1d
	SOFT_VER		[0-7]	-	-	-	-	Software version
0x10	TEMP_HIST_HI	R	[8-15]	-2	2	1	C	Temperature hysteresis upper limit. *

	TEMP_HIST_LO		[0-7]	-2	2	1	C	Temperature hysteresis lower limit. *
0x11	DATE_REG1	R	[8-15]	0	2099	-	-	Actual year
	DATE_REG2		[0-7]	1	12	-	-	Actual month
0x12	DATE_REG3	R	[8-15]	1	31	-	-	Actual day
	TIME_REG1		[0-7]	1	23	-	h	Actual hour
0x13	TIME_REG2	R	[8-15]	0	59	-	m	Actual minutes
	CURR_ZONE		[0-7]	0	6	-	-	Actual time zone for weekly programmer
0x14	-	RW	[12-15]	-	-	-	-	-
	SET_REG1.COM_PRACA_WENT		[11]	0	1	1	-	Fan condition in manual mode selection 0 – continuous mode 1 – thermostatic mode
	SET_REG1.COM_T1		[10]	0	1	1	-	Leading sense selection 0 – interior sense 1 – exterior sense
	SET_REG1.COM_MODE0		[9]	0	1	1	-	Control mode selection 0 – manual control 1 – automatic control
	SET_REG1.COMctrlSTART_bit		[8]	0	1	1	-	COM connector device ON/OFF function 0 – OFF 1 – ON
	TAF_SET_TEMP_WR		[0-7]	0	12	1	C	Antifreeze temperature set
0x15	TZAD_MANUAL_WR	RW	[8-15]	5	50	1	C	Manual mode pre-set temperature set
	TZAD_AUTO_WR		[0-7]	5	50	1		Automatic mode pre-set temperature set
0x16	VSPEED_MANUAL_WR	RW	[8-15]	1	99	1	%	Manual mode fan speed set
	PLANT_COEFF_WR		[0-7]	1	5	1	-	Temperature regulator set
0x17	SEL_CALENDAR_TYPE	RW	[8-10]	0	1	1	-	Programmer mode set 0:0:0 - OFF; 0:0:1 - 7d; 0:1:0 - 5d+2d; 0:1:1 - 1d.

\* TEMP\_HIST\_HI = (MSB - 100) / 10

\* TEMP\_HIST\_LO = (LSB - 100) / 10

