

FC020 – fancoil controller, RTC, 4xAI, 2xAO, 7xDO, 4xDI, 2xRS485

- 50 words can be read at the same time (i.e. 100 bytes)
- whole range can be addressed bitwise

name	register	type	description	notes / defaults
module ID	1 LSB 1 MSB	R	module type identification	0501hex
firmware	2 LSB 2 MSB	R	firmware version	e.g. 0005hex
status LSB	3 LSB	R, W RAM	module status lower byte bit 0 – write to EEPROM enabled bit 4 – init EEPROM bit 5 – calibration offset bit 6 –calibration span bit 7 –calibration enable	Init EEPROM follows if the INIT switch was ON at power up, and if INIT switch was OFF at setting bit 4 to 1 (indicated by bit 2 in Status MSB) calibration is enabled if the INIT switch was ON at power up, and if INIT switch was OFF at setting bit 7 to 1 (indicated by bit 3 in Status MSB) calibration offset is performed by setting bit 7 to 0 (must have been in 1 before) and setting bit 5 to 1 calibration span is performed by setting bit 7 to 0 (must have been in 1 before) and setting bit 6 to 1
status MSB	3 MSB	R, RAM	module status upper byte bit 0 0 normal mode 1 init mode bit 1 1 at the next EEPROM write attempt will all data be written to EEPROM 0 at the next EEPROM write attempt will received data be written to RAM only bit 2 – 1 – EEPROM initialized bit 3 – 0 calibration disabled 1 calibration enabled bit 4 – 0 bit 5 – 1 bit 6 – 0 bit 7 – 1	

address	4 LSB	R,W EEPROM	Modbus module address (default = 1)	!!! the change will be effective after restart only (however the register will be set immediately)
baud rate	4 MSB	R,W EEPROM	communication speed 10 _{dec} ... 1 200 bps 11 _{dec} ... 2 400 bps 12 _{dec} ... 4 800 bps 13 _{dec} ... 9 600 bps (default) 14 _{dec} ... 19 200 bps 15 _{dec} ... 38 400 bps 16 _{dec} ... 57 600 bps 17 _{dec} ... 115 200 bps	!!! the change will be effective after restart only (however the register will be set immediately)
serial port settings	5 LSB	R,W EEPROM	serial line parameter settings (default = no parity, 1 stop bit)	bits 0-1 ... parity (00 – no parity, 01 – even, 10 – odd) bit 2 ... stop bits (0 – one, 1 - two) !!! the change will be effective after restart only (however the register will be set immediately)
	5 MSB		reserved	
	6 LSB 6 MSB		reserved	
relay	7 LSB	R, RAM	output relay status (DO1-DO7), outputs DO4 and DO5 are not controlled by any internal algorithm in this firmware version	bit 0 ... DO1, fan st. 1 bit 1 ... DO2, fan st. 2 bit 2 ... DO3, fan st. 3 bit 3 ... DO4, bit 4 ... DO5, bit 5 ... DO6, heating bit 6 ... DO7, cooling
inputs	7 MSB	R, RAM	digital input status and heat/cool demands; DIx are physical values and are not influenced by the inputs settings register settings	bit 0 ... DI1, presence bit 1 ... DI2, window contact bit 2 ... DI3, change-over bit 3 ... DI4, party mode bit 4 ... heating demand (PID output HEAT > 5%) bit 5 ... cooling demand (PID output COOL > 5%)
PID output HEAT	8 LSB	R, RAM	heating controller output (or cooling output at change-over active)	in %, range 0 .. 100%
PID output COOL	8 MSB	R, RAM	cooling controller output (also at change-over active)	in %, range 0 .. 100%
PID fan speed	9 LSB	R, RAM	fan demand from the PID controller	0 ... off 1 ... Stage 1 2 ... Stage 2 3 ... Stage 3

UC communication state	9 MSB	R, RAM	communication status of UC010: if communication is not OK, after 60 secs the outputs go to 0 (except those controlled manually, see manual control)	0 ... communication OK 1 ... timeout 2 ... MB (motherboard) exception 3 ... MB error
manual control	10 LSB	R, W RAM	bits 0..2 : manual output control; if a bit is set to 1, the output goes to state defined below (see manual fan speed, manual heat output, manual cool output); if set to 0, PID output values apply bits 3..4 : always controlled through outputs bit 5 : change-over command over bus; active only if hardware C/O disabled, see input settings	bit 0 ... fan bit 1 ... heat output bit 2 ... cool output bit 3 ... DO4 bit 4 ... DO5 bit 5 ... SW change-over command
manual fan speed	10 MSB	R, W RAM	manual fan speed setting (only if the corresponding bit in the manual control register is set)	0 ... off 1 ... Stage 1 2 ... Stage 2 3 ... Stage 3
manual heat output	11 LSB	R, W RAM	manual heat output setting (only if the corresponding bit in the manual control register is set)	in %, range 0 .. 100%
manual cool output	11 MSB	R, W RAM	manual cool output setting (only if the corresponding bit in the manual control register is set)	in %, range 0 .. 100%
set temp correction UC010	12 LSB 12 MSB	R, W RAM	setpoint correction set by user; if UC010 is connected, it is possible to write in register directly from Modbus or UC010 3.5°C reads 350 (limits see min. & max. rel.temp correction)	recalculate: temperature = read value / 100 0 ... 0 199.99 ... 19999 -0.01 ... 0FFFFhex -199.99 ... 0B1E1hex
actual temp set point HEAT	13 LSB 13 MSB	R, RAM	actual heating setpoint incl. setpoint correction (reg. 12)	recalculate: temperature = read value / 100 0 ... 0 199.99 ... 19999 -0.01 ... 0FFFFhex -199.99 ... 0B1E1hex
actual temp set point COOL	14 LSB 14 MSB	R, RAM	actual cooling setpoint incl. setpoint correction (reg. 12)	recalculate: temperature = read value / 100 0 ... 0 199.99 ... 19999 -0.01 ... 0FFFFhex -199.99 ... 0B1E1hex

set day/ comfort heating temp	15 LSB 15 MSB	R,W EEPROM	day/comfort mode heating temperature setpoint set by user (default = 21°C, 0x0834)	recalculate: temperature = read value / 100 0 ... 0 199.99 ... 19999 -0.01 ... 0FFFFhex -199.99 ... 0B1E1hex
set night/ pre-comfort heating temp	16 LSB 16 MSB	R,W EEPROM	night/standby mode heating temperature setpoint set by user (default = 19°C, 0x076C)	recalculate: temperature = read value / 100 0 ... 0 199.99 ... 19999 -0.01 ... 0FFFFhex -199.99 ... 0B1E1hex
set depression/ economy heating temp	17 LSB 17 MSB	R,W EEPROM	off mode heating temperature setpoint set by user (default = 12°C, 0x04B0)	recalculate: temperature = read value / 100 0 ... 0 199.99 ... 19999 -0.01 ... 0FFFFhex -199.99 ... 0B1E1hex
set day/ comfort cooling temp	18 LSB 18 MSB	R,W EEPROM	day/comfort mode cooling temperature setpoint set by user (default = 24°C, 0x0960)	recalculate: temperature = read value / 100 0 ... 0 199.99 ... 19999 -0.01 ... 0FFFFhex -199.99 ... 0B1E1hex
set night/ pre-comfort cooling temp	19 LSB 19 MSB	R,W EEPROM	night/standby mode cooling temperature setpoint set by user (default = 26°C, 0x0A28)	recalculate: temperature = read value / 100 0 ... 0 199.99 ... 19999 -0.01 ... 0FFFFhex -199.99 ... 0B1E1hex
set depression/ economy cooling temp	20 LSB 20 MSB	R,W EEPROM	off mode cooling temperature setpoint set by user (default = 35°C, 0x0DAC)	recalculate: temperature = read value / 100 0 ... 0 199.99 ... 19999 -0.01 ... 0FFFFhex -199.99 ... 0B1E1hex

actual temp UC010	21 LSB 21 MSB	R, RAM	actual temperature measured by the UC010 room unit incl. correction (see temp sensor corr)	recalculate: temperature = read value / 100 0 ... 0 199.99 ... 19999 -0.01 ... 0FFFFhex -199.99 ... 0B1E1hex
actual FC020 temp	22 LSB 22 MSB	R, RAM	actual temperature input AI1, Pt1000 sensor, incl. correction (see temp sensor corr FC020)	recalculate: temperature = read value / 100 0 ... 0 199.99 ... 19999 -0.01 ... 0FFFFhex -199.99 ... 0B1E1hex
set presence mode	23 LSB 23 MSB	R,W EEPROM	presence status set by user (if inputs Presence and Window contact are enabled and active – see input settings -, they have priority over this register) (default = comfort/day, 0x0001)	bit 0 ... comfort / day bit 1 ... standby / night bit 2 ... off / depression bit 3 ... auto (clock) bit 4 ... party (sun + drink + clock, after 2h goes to auto) bit 5 to 14 ... reserved bit 15 ... write enable (if set to 1 value will be written into register, if in 0 attempt will be ignored)
set fan mode	24 LSB 24 MSB	R, W, EEPROM	fan status set by user (default = auto, 0x0001)	bit 0 ... Auto (fan + A) bit 1 ... Off (fan + M) bit 2 ... Man 1 (fan + M + Stage1) bit 3 ... Man 2 (fan + M + Stage1 and 2) bit 4 ... Man 3 (fan + M + Stage1,2 and 3) bit 5 to 14 ... reserved bit 15 ... write enable (if set to 1 value will be written into register, if in 0 attempt will be ignored)
actual control mode	25 LSB	R, RAM	actual mode used for control, if on manual then the actual control mode is equal to set presence mode , if on auto then the actual control mode is according to time schedule	bit 0 ... comfort/day bit 1 ... standby/night bit 2 ... off/depression
FC slaves communication state	25 MSB	R, RAM	communication status with FC020 slaves (Multislave configuration)	0 ... OK 1 and more ... the first FC020 with communication error

controller settings	26 LSB	R,W EEPROM	controller configuration. If set as 2-pipe, the C/O function is enabled. (defaults = hotel, relative, fan is on at heat and cool, 3 stage fan, valve protection on, NC valves: 0x40)	bit 0 ... presence mode (0 – hotel, 1 – residential) bit 1 ... setpoint shift display (0: relative, 1: absolute temp.) bit 2 ... 1 - stop fan when HEAT, 0 – fan allowed when HEAT) bit 3 ... 1 - stop fan when COOL, 0 – fan allowed when COOL) bits 4-5 ... fan type (00 – 3 stages, 01 – 2 stages, 10 – 1 stage) bit 6 ... valve exercising (1 – enabled) bit 7 ... valve actuator type: 0: NC, 1: NO
input settings	26 MSB	R,W EEPROM	inputs configuration DI1 ... presence DI2 ... window contact DI3 ... change-over (if disabled, then SW C/O function is enabled – C/O command is sent over the bus, see manual control) DI4 ... party mode (default = inputs enabled, normally open, i.e. active when contact closed, 0xFF)	bits 0 ... 3: inputs DI1 (bit 0) to DI4 (bit 3) enabled for controller function bits 4 ... 7: inputs DI1 (bit 0) to DI4 (bit 3) sense (0– NC– normally closed, 1– NO– normally open)
P band	27 LSB 27 MSB	R,W EEPROM	controller P-band	in 0.1 K (2 K, 0x0014)
I const	28 LSB 28 MSB	R,W EEPROM	controller I – constant; if out of bounds, a new recalculated value is set after restart	in seconds; if set to 0, integration part is disabled (60 min, 0x0E10)

controller settings 2	29 LSB	R,W EEPROM (slave function off, regulation on limitations, UC010 not connected, 4-pipe controller, 0X80)	<p>controller configuration, part 2.</p> <p>Limitation: AI1 acts as a supply air sensor which limits the supply air temp. (see limitation temp heat reg. 56 & cool reg. 57). The control sensor is the UC010 sensor. If the AI1 sensor is not connected, limitation is not active and the UC010 sensor is the control sensor.</p> <p>AI1 controller and UC010 correction: Control to AI1 temperature sensor reg. 22. Set point correction is set via UC010 (reg. 12).</p> <p>Average: Control to control to average (AI1 reg. 22 and UC010 temperature reg. 21). Set point correction is set via UC010 (reg. 12).</p> <p>Analogue controller: Control to AI1 temperature sensor reg. 22. Set point correction is set via potentiometer (reg. 147).</p> <p>Defaults: control to AI1 sensor, UC010 not connected, 4-pipe fan: 0x80</p>	<p>bit1 ... enables FC slaves (not actively communicating with UC010 - Change takes effect only after device restart)</p> <p>bits 4 and 5:</p> <p>Limitation: bit4 =0 and bit5 = 0: Limitation– control to UC010 temperature reg. 21 with AI1 limitation sensor</p> <p>AI1 controller and UC010 correction: bit4=1 and bit5=0: – control to AI1 sensor (reg. 22);</p> <p>Average: bit4=0 and bit5=1 – control to average (AI1 reg. 22 and UC010 temperature reg. 21)</p> <p>Analogue controller: bit 6 ... UC010 connected (0 – not connected= analogue controller; 1 – connected)</p> <p>Fancoil type: bit 7: (0 ... 2-pipe, 1 ... 4-pipe)</p>
multi-slave number	29 MSB	R, W EEPROM (Multi-slave off, 0x00)	<p>amount of FC020 slaves (connected to the same bus as UC010, starting with Modbus address 10) – if this value is non-zero, the controller acts as a master (change is applied after device restart); from slave modules inputs are read and added to master inputs to control the controller mode</p>	<p>0 ... multi-slave disabled 1 and more ... number of FC020 slaves</p>
AO1	30 LSB 30 MSB	R, W, RAM	analogue output 1 (0..10 V)	<p>value in %, range 0 .. 100%; same value as PID output HEAT</p>

AO2	31 LSB 31 MSB	R, W, RAM	analogue output 2 (0..10 V)	value in %, range 0 .. 100%; same value as PID output COOL
pot correction FC020	32 LSB 32 MSB	R,W EEPROM	setpoint correction, adds to the value read at AI2	value / 100, 350 dec = 3.5 K
min rel. temp correction	33 LSB 33 MSB	R,W EEPROM	minimum relative user temperature correction, a positive value is saved and is taken as negative limit	recalculate: minimum correction = -(read value/100); -10.00 ... 1000 (-3.5 °C, 0x015E)
max rel. temp correction	34 LSB 34 MSB	R,W EEPROM	maximum relative user temperature correction	recalculate: maximum correction = (read value/100); 10.00 ... 1000 (3.5 °C, 0x015E)
min day, night, depression temp	35 LSB 35 MSB	R,W EEPROM	minimum temperature which user can set as setpoint for day, night, and off modes -199.99 to 199.99 (default = 10 °C, 0x03E8)	recalculate: temperature = read value / 100 0 ... 0 199.99 ... 19999 -0.01 ... 0FFFFhex -199.99 ... 0B1E1hex
max day, night, depression temp	36 LSB 36 MSB	R,W EEPROM	maximum temperature which user can set as setpoint for day, night, and off modes -199.99 to 199.99 (default = 40 °C, 0x0FA0)	recalculate: temperature = read value / 100 0 ... 0 199.99 ... 19999 -0.01 ... 0FFFFhex -199.99 ... 0B1E1hex
temp sensor corr UC010	37 LSB 37 MSB	R,W EEPROM	correction: adds to the actual temperature measured by the room unit sensor -20.00 to 20.00 (default = -1,5 K, 0xFF6A)	recalculate: temperature = read value / 100 0 ... 0 199.99 ... 19999 -0.01 ... 0FFFFhex -199.99 ... 0B1E1hex
pot min	38 LSB 38 MSB	R,W EEPROM	lower setpoint limit for the potentiometer (AI2) in Ohm default: 40 Ohm, 0x0190	limit = value * 10 400 = 40 Ohm
step temp	39 LSB	R,W EEPROM	step for user temperature setpoints setting (default = 0.5 °C, 0x32)	step = read value / 100 1 ... 0.01 50 ... 0.5 100 ... 1 etc.

step minutes	39 MSB	R,W EEPROM	time step for time schedule setting (default = 5 mins, 0x05)	in minutes
pot max	40 LSB 40 MSB	R,W EEPROM	upper setpoint limit for the potentiometer (AI2) in Ohm default: 470 Ohm, 0x125C	limit = value * 10 4700 = 470 Ohm
show mode	41 LSB 41 MSB	R,W EEPROM	data that roll on the LCD display (default = 1, temperature) If only one of the bits is active there is only one value displayed. Otherwise they change periodically after show time .	bit 0 ... temperature bit 1 ... outside temp. = AI1 temperature at FC020 bit 2 ... current time (default = temperature, 0x0001)
show time	42 LSB	R,W EEPROM	time (in 100 ms) to display each value in show mode (default = 3 s)	see show mode
edit return time	42 MSB	R,W EEPROM	time (in 100 ms) of user inactivity to return from edit mode to show mode (default = 30 s)	
quick edit mode number	43 LSB	R,W EEPROM	number of mode which is editable through quick edit menu (short push of the knob) (default = fan mode, 0x02)	0 ... push function inactive 1 ... presence mode 2 ... fan mode
change-over period	43 MSB	R,W EEPROM	wait time between heating and cooling modes after the C/O signal is received (default = 30 min, 0x1E)	in minutes, range 1 ... 255
long push time	44 LSB	R,W EEPROM	time (in 100 ms) evaluated as long push (go to time schedule menu / leave menu) (default = 1.5 s, 0x0F)	for editing of the time schedule and presence or fan mode
super long push time	44 MSB	R,W EEPROM	time (in 100 ms) evaluated as superlong push (go to settings menu) (default = 5 s, 0x32)	for actual time and basic setpoints settings

allowed operation modes	45 LSB 45 MSB	R,W EEPROM	settings that user is able to perform 0 ... disabled 1 ... enabled (default = temp corr, fan mode 0x0201)	bit 0 ... temp corr. bit 1 ... heating day temp bit 2 ... heating night temp bit 3 ... heating depression temp bit 4 ... cooling day temp bit 5 ... cooling night temp bit 6 ... cooling depression temp bit 7 ... RTC time bit 8 ... presence mode bit 9 ... fan mode bit 10 ... time programme
presence mode edit mask	46 LSB 46 MSB	R,W EEPROM	states in presence mode that user is able to switch between (default = all, 0x001F)	bit 0 ... day (sun + occupied house) bit 1 ... night (moon + occupied house) bit 2 ... depression (empty house) bit 3 ... auto (clock) bit 4 ... party (sun + drink + clock, after 2h goes to auto)
fan mode edit mask	47 LSB 47 MSB	R,W EEPROM	states in fan mode that user is able to switch between (default = all, 0x001F)	bit 0 ... Auto (fan + A) bit 1 ... Man Off (fan + M) bit 2 ... Man 1 (fan + M + Stage 1) bit 3 ... Man 2 (fan + M + Stage 1,2) bit 4 ... Man 3 (fan + M + Stage 1,2,3)
display symbols	48 LSB 48 MSB	R, W, RAM	symbols that may be user-displayed on the UC010 LCD display NB: combination of spanner and alarm bell indicates communication error between FC020 and UC010	bit 0: spanner bit 1: boiler bit 2: alarm bell bit 3...bit 14: reserved
RTC	49 LSB 49 MSB 50 LSB 50 MSB 51 LSB 51 MSB 52 LSB 52 MSB	R,W EEPROM	Real time clock (not subject to INIT command)	see table below; to write to those registers, write to EEPROM must be enabled in the status LSB register

Range 1	53 LSB	R,W EEPROM	AI1 and AI2 range settings 1 – temperature (Pt1000) 2 – voltage (0...10 V) 3 – resistance (0...1600 Ohm) 4 – current (4...20 mA, a 120 Ohm external resistor necessary) 5 – resistance (0...5000 Ohm)	bits 0...3: AI1 bits 4...7: AI2 These settings are to be changed only if the FC020 is used as an I/O module. Values: see regs. AI1 and AI2 temperature is real value * 100 + 50 °C shift (20000dec = 150 °C) resistance 0....1600 Ohm is real value * 10 (16000dec = 1600 Ohm)
Range 2	53 MSB	R,W EEPROM	AI3 and AI4 range settings 1 – temperature (Pt1000) 2 – voltage (0...10 V) 3 – resistance (0...1600 Ohm) 4 – current (4...20 mA, a 120 Ohm external resistor necessary) 5 – resistance (0...5000 Ohm)	bits 0...3: AI3 bits 4...7: AI4 These settings are to be changed only if the FC020 is used as an I/O module. Values: see regs. AI3 and AI4 temperature is real value * 100 + 50 °C shift (20000dec = 150 °C) resistance 0....1600 Ohm is real value * 10 (16000dec = 1600 Ohm)
temp sensor corr. FC020	54 LSB 54 MSB	R,W EEPROM	Temp. sensor correction (Pt1000 at AI1) -20...20 K	Recalculate: temperature = read value / 100 0 ... 0 199.99 ... 19999 -0.01 ... 0FFFFhex -199.99 ... 0B1E1hex
auxiliary temp sensor corr. FC020	55 LSB 55 MSB	R,W EEPROM	Auxiliary temp. sensor correction (Pt1000 at AI4) -20...20 K	Recalculate: temperature = read value / 100 0 ... 0 199.99 ... 19999 -0.01 ... 0FFFFhex -199.99 ... 0B1E1hex

limitation temp. heat	56 LSB 56 MSB	R,W EEPROM	Temperature for supply air limitation, upper limit, see controller settings 2. The AI1 (limitation sensor reg. 21) measured value will not exceed the sum of actual room temperature (reg. 22) and limitation temp. heat . Default = 10 K. (0x03E8)	Recalculate: temperature = read value / 100 0 ... 0 199.99 ... 19999 -0.01 ... 0FFFFhex -199.99 ... 0B1E1hex
limitation temp. cool	57 LSB 57 MSB	R,W EEPROM	Temperature for supply air limitation, lower limit, see controller settings 2. The AI1 (limitation sensor reg. 21) measured value will not drop below actual room temperature (reg. 22) + limitation temp. cool . Default = 6 K. (0x0258)	Recalculate: temperature = read value / 100 0 ... 0 199.99 ... 19999 -0.01 ... 0FFFFhex -199.99 ... 0B1E1hex
actual FC020 auxiliary temp.	58 LSB 58 MSB	R, RAM	actual value of aux. temp sensor at AI4 incl. correction (see secondary temp sensor corr FC020) This temperature is for information only and is not involved in the control process.	Recalculate: temperature = read value / 100 0 ... 0 199.99 ... 19999 -0.01 ... 0FFFFhex -199.99 ... 0B1E1hex
setpoint shift FC020	59 LSB 59 MSB	R, RAM	setpoint correction, as set at AI2 by a potentiometer. See pot. correction for limits.	Recalculate: temperature = read value / 100 0 ... 0 199.99 ... 19999 -0.01 ... 0FFFFhex -199.99 ... 0B1E1hex
set fan mode FC020	60 LSB 60 MSB	R, RAM	fan status set by user over AI3 See register 148 for the resistor values for individual stages.	bit 0 ... Auto bit 1 ... Off bit 2 ... Man 1 bit 3 ... Man 2 bit 4 ... Man 3
modbus correction	61 LSB 61 MSB	R,W RAM	Correction temperature value set via Modbus map (it is used if register 29 LSB controller settings 2 bit 3 is on). It is used instead of room unit potentiometer.	Recalculate: temperature = read value / 100 0 ... 0 199.99 ... 19999 -0.01 ... 0FFFFhex -199.99 ... 0B1E1hex
program Monday Event 1 time	62 LSB 62 MSB	R,W EEPROM	time schedule, Monday, time of event No. 1, in mins since 0:00 (midnight) (default = 06:00 h, 0x0168)	e.g. 121 ... 2h 1min

program Monday Event 1 value	63 LSB 63 MSB	R,W EEPROM	time schedule, Monday, event No. 1, value (default = 0)	0 ... day/comfort 1 ... night/standby 2 ... off/depression bit 15 = 1 ... event is disabled
program Monday Event 2 time	64 LSB 64 MSB	R,W EEPROM	time schedule, Monday, time of event No. 2, in mins since 0:00 (midnight) (default = 08:00 h)	e.g. 121 ... 2h 1min
program Monday Event 2 value	65 LSB 65 MSB	R,W EEPROM	time schedule, Monday, event No. 2, value (default = 1)	0 ... day/comfort 1 ... night/standby 2 ... off/depression bit 15 = 1 ... event is disabled
program Monday Event 3 time	66 LSB 66 MSB	R,W EEPROM	time schedule, Monday, time of event No. 3, in mins since 0:00 (midnight) (default = 14:00 h)	e.g. 121 ... 2h 1min
program Monday Event 3 value	67 LSB 67 MSB	R,W EEPROM	time schedule, Monday, event No. 3, value (default = 0)	0 ... day/comfort 1 ... night/standby 2 ... off/depression bit 15 = 1 ... event is disabled
program Monday Event 4 time	68 LSB 68 MSB	R,W EEPROM	time schedule, Monday, time of event No. 4, in mins since 0:00 (midnight) (default = 22:00 h)	e.g. 121 ... 2h 1min
program Monday Event 4 value	69 LSB 69 MSB	R,W EEPROM	time schedule, Monday, event No. 4, value (default = 1)	0 ... day/comfort 1 ... night/standby 2 ... off/depression bit 15 = 1 ... event is disabled
program Monday Event 5 time	70 LSB 70 MSB	R,W EEPROM	time schedule, Monday, time of event No. 5, in mins since 0:00 (midnight) (default = 06:00 h, 0x0168)	e.g. 121 ... 2h 1min
program Monday Event 5 value	71 LSB 71 MSB	R,W EEPROM	time schedule, Monday, event No. 5, value (default = disabled, 0x8000)	0 ... day/comfort 1 ... night/standby 2 ... off/depression bit 15 = 1 ... event is disabled
program Monday Event 6 time	72 LSB 72 MSB	R,W EEPROM	time schedule, Monday, time of event No. 6, in mins since 0:00 (midnight) (default = 06:00 h)	e.g. 121 ... 2h 1min

program Monday Event 6 value	73 LSB 73 MSB	R,W EEPROM	time schedule, Monday, event No. 6, value (default = disabled)	0 ... day/comfort 1 ... night/standby 2 ... off/depression bit 15 = 1 ... event is disabled
program Tuesday Event 1 time	74 LSB 74 MSB	R,W EEPROM	time schedule, Tuesday, time of event No. 1, in mins since 0:00 (midnight) (default = 06:00 h)	e.g. 121 ... 2h 1min
...
program Sunday Event 6 value	137 LSB 137 MSB	R,W EEPROM	time schedule, Sunday, event No. 6, value (default = disabled)	0 ... day/comfort 1 ... night/standby 2 ... off/depression bit 15 = 1 ... event is disabled
AI1	146 LSB 146 MSB	R, RAM	AI1 value (control temperature sensor Pt1000)	Recalculate: temperature = read value / 100 0 ... 0 199.99 ... 19999 -0.01 ... 0FFFFhex -199.99 ... 0B1E1hex
AI2	147 LSB 147 MSB	R, RAM	AI2 value (setpoint shift potentiometer)	Recalculate: temperature = read value / 100 0 ... 0 199.99 ... 19999 -0.01 ... 0FFFFhex -199.99 ... 0B1E1hex
AI3	148 LSB 148 MSB	R, RAM	AI3 value (resistors to switch fan mode) 0...139 Ohm Off 140...224 Ohm Stage 1 225...329 Ohm Stage 2 330...389 Ohm Stage 3 > 390 Ohm Auto	Recalculate: temperature = read value / 100 0 ... 0 199.99 ... 19999 -0.01 ... 0FFFFhex -199.99 ... 0B1E1hex
AI4	149 LSB 149 MSB	R, RAM	AI4 value (auxiliary temperature sensor Pt1000)	Recalculate: temperature = read value / 100 0 ... 0 199.99 ... 19999 -0.01 ... 0FFFFhex -199.99 ... 0B1E1hex

uptime	1000 LSB 1000 MSB 1001 LSB 1001 MSB	R	uptime (s)	number of seconds after last power on / reset
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Real time table

Addr.	bit7	bit6	bit5	bit4	bit3	bit2	bit1	bit0	Function	Range
49 LSB		10xsecs			seconds				secs	00-59
49 MSB	0	10xmins			minutes				mins	00-59
50 LSB	0		10xhours	10xhours	hours				hours	00-23
50 MSB	0	0	0	0	0	day			day	01-07
51 LSB	0	0	10xdate		date				date	01-31
51 MSB	0	0	0	10xmonth	month				month	01-12
52 LSB		10xyear			year				year	00-99
52 MSB	0	0	0	0	0	0	0	0	not used	00