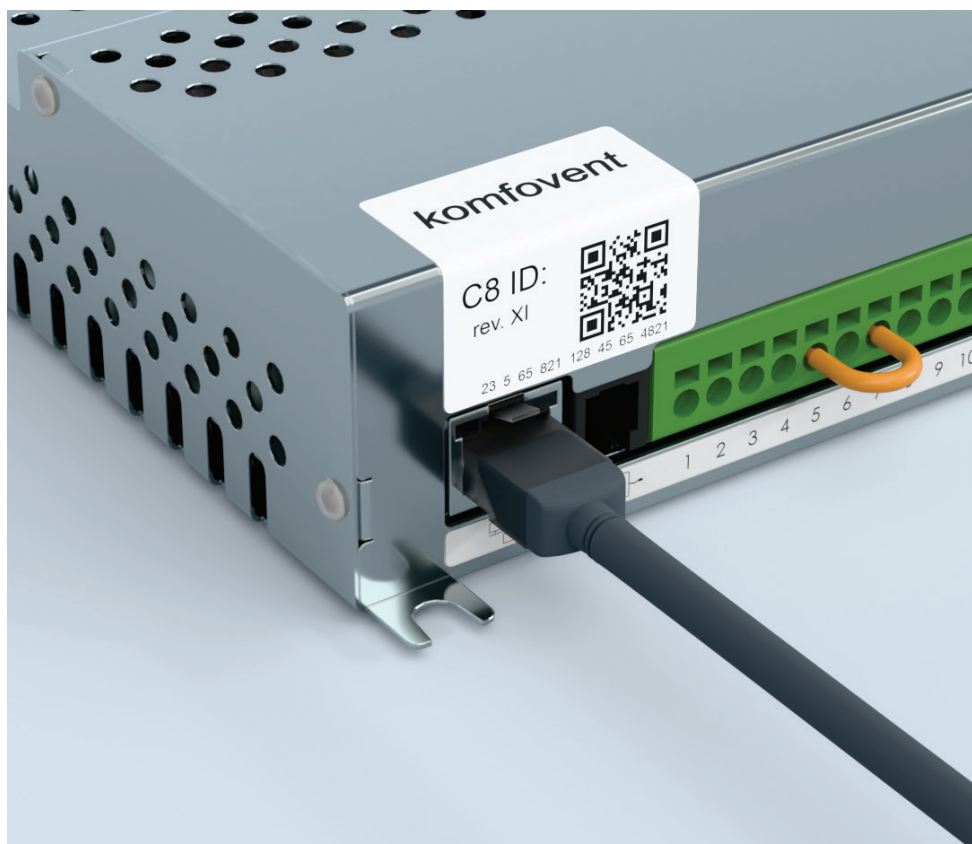


DESCRIPTION OF C8 CONTROLLER MODBUS



This manual is compatible with C8 controller firmware version x.x.x.4 and above (X – does not matter).

C8 controller supports **Modbus RTU** and **Modbus TCP** protocols. Both protocols are using main commands to read and preset registers. Supported Modbus commands are presented in Table 1.



When using Modbus RTU or Modbus TCP/IP, minimum polling time should be 500 ms or longer. In cases when multiple AHU's are connected to the same Modbus network, at least 1s. polling time is recommended.

Table 1. Supported Modbus commands

Function code	Description
03	Read Holding Registers
06	Preset Single Register
16	Preset Multiple Registers

Modbus RTU protocol works via RS-485 interface. Default interface settings are presented in Table 2. Default interface settings and Modbus RTU protocol ID can be changed using the website. To change settings, connect air handling unit (AHU) to your network. Default AHU IP address is 192.168.0.60. Go to your browser and type default AHU IP address. You should see „Login“ window (Fig. 1). To login type username and password. Default username: „user“ and password: „user“.

Table 2. Default settings of RS485 interface

Baudrate	19200
Word length	8
Parity	EVEN
Stop bits	1

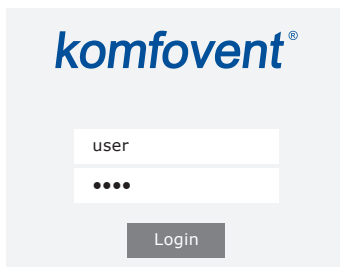


Fig. 1. Website login window

To find RS-485 interface settings and Modbus RTU protocol ID go to „SETTINGS“ and „CONNECTIVITY“ (Fig. 2). If you logged in, but can't open „SETTINGS“ window make sure, that JavaScript in your web browser is enabled (activated).

CONNECTIVITY

Status	Connected			
DHCP	☐			
IP address	192	168	0	60
Subnet mask	255	255	255	0
Gateway	192	168	0	1
BACnet ID	60			
BACnet Port	47808			
Modbus RTU	Panel ▼			

Fig. 2. Connectivity settings

If you can't see „Login“ window, make sure that:

- your device and air handling unit are connected in the same network;
- your device and air handling unit are in the same subnet;
- your proxy server and firewall isn't blocking connection;
- you typed correct IP address.

If your device is connected directly to C8 controller, make sure, that your DHCP server is disabled and your static IP is in same subnet. If you are using PC and Windows operating system, go to „Local Area Connection Properties“, go to „Internet Protocol Version 4 (TCP/IPv4) Properties“ (Fig. 3), check „Use the following IP address“ and type your static parameters, for example:

- IP address: 192.168.0.61;
- Subnet Mask: 255.255.255.0;
- Default gateway: 192.168.0.1.

Internet Protocol Version 4 (TCP/IPv4) Properties

General

You can get IP settings assigned automatically if your network supports this capability. Otherwise, you need to ask your network administrator for the appropriate IP settings.

☐ Obtain an IP address automatically

☒ Use the following IP address:

IP address: 192 . 168 . 0 . 61

Subnet mask: 255 . 255 . 255 . 0

Default gateway: 192 . 168 . 0 . 1

☐ Obtain DNS server address automatically

☒ Use the following DNS server addresses:

Preferred DNS server:

Alternate DNS server:

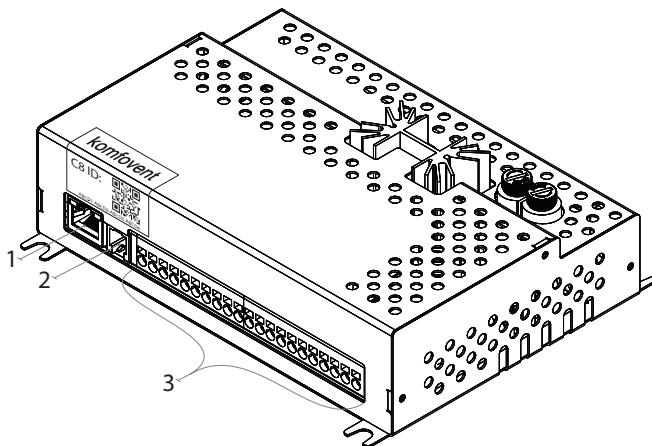
☐ Validate settings upon exit

Advanced...

OK Cancel

Fig. 3. Personal computer static IP address configuration

The air handling unit has external connection terminals in the control box, inside the air handling unit. Modbus A and B communication wires can be connected to 1 and 2 terminals of connection for external elements (Fig. 4, Fig. 5). To connect devices use twisted pair cable. Maximum cable length is 150 m. C8 controller ground point (any GND terminal from connection too external elements – 4, 7, 10, 12) and other device should be connected together, if distance between the RS-485 interfaces is more than 10 m. (Fig. 4, Fig. 5).



1. Ethernet connection of computer network or Internet
2. Controller panel connection
3. Connection of external elements

Fig. 4. Controller with the connection terminals

1	A	Modbus RTU	RS485
2	B		
3	+24V	Air quality sensor / Humidity sensor	B8
4	GND		
5	0..10V	Water mixing valve actuator / DX control Frost protection	AOUT
6	+24V		
7	GND		
8	0..10V	Supply air temperature sensor	B1
9	NTC		
10	GND	Return water temperature sensor	B5
11	NTC		
12	GND	General Fire alarm Priority	DIN
13	C		
14	NC		
15	NO	General Heating Cooling	DOUT
16	C		
17	NO		
18	NO	Air damper actuators Max 15W	FG1
19	~		
20	~230V		
21	N		

Fig. 5. Connection diagram for external elements

Modbus TCP protocol works via Ethernet interface, connection is provided to RJ-45 socket on the C8 controller (Fig. 4). Default IP address is 192.168.0.60, and port is 502. To connect C8 controller via Modbus TCP make sure, that proxy servers or firewall isn't blocking device destination IP address and 502 port is opened. Controller IP address can be changed using the website (Fig. 2). Instructions how to connect and login to website was presented at Modbus RTU section. IP address and subnet mask also can be changed using C6.1 touch panel. To find these settings click touch C6.1 panel screen, click „Menu” button, click „Settings” button and don't release it, for more than 5 seconds, after that „Advanced settings” window will pop-up. Click „Connectivity” button and here you will find IP address and subnet mask (Fig. 6). If you want to change one of these parameters, just click on it and edit.

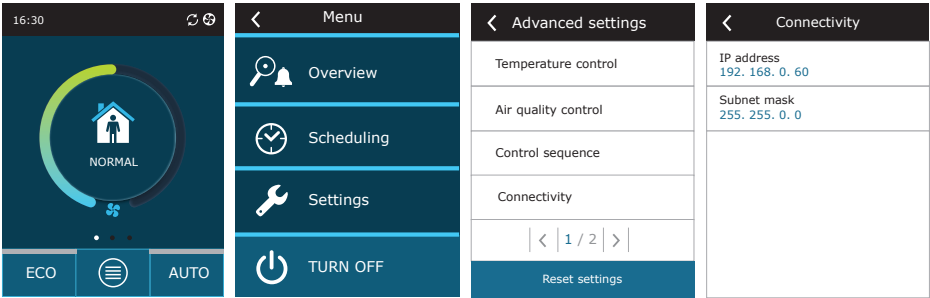


Fig. 6. C6.1 touch panel connectivity settings

For connection the CAT5 category cable should be used. The maximum cable length between device and controller C8 is 100 m.

C8 controller Modbus registers with descriptions are presented in Table 3.

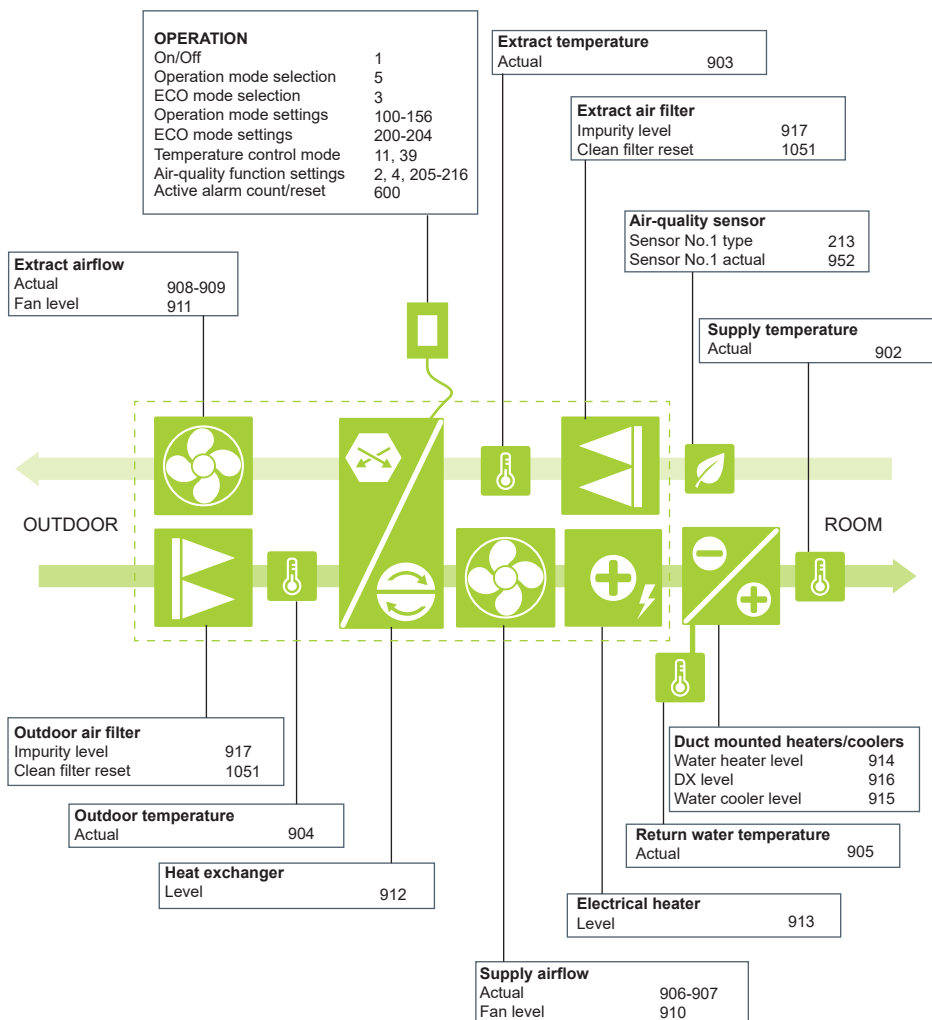


Table 3

Group	Subgroups	Register number	Register name	Data			Values and Units	Examples and comments
				Access	Type	Range		
Main control	Modes	1	ON/OFF status	R/W	unsigned char	0 - 1	Off = 0, On = 1	
		2	Auto mode control	RO	unsigned char	0 - 1	Scheduling = 0, Air Quality = 1	
		3	ECO mode	R/W	unsigned char	0 - 1	Off = 0, On = 1	
		4	AUTO mode	R/W	unsigned char	0 - 1	Off = 0, On = 1	
		5	Current mode	R/W	unsigned char	0 - 10	READ ONLY: Standby = 0, Away = 1, Normal = 2, Intensive = 3, Boost = 4, Kitchen = 5, Fireplace = 6, Override = 7, Holiday = 8, Air quality = 9, Off = 10 WRITE ONLY: Away = 1, Normal = 2, Intensive = 3, Boost = 4	
		6	Scheduler operation mode	R/W	unsigned char	0 - 3	StayAtHome = 0, WorkingWeek = 1, Office = 2, Custom = 3	
		7	Next mode	RO	unsigned char	0 - 8	Standby = 0, Away = 1, Normal = 2, Intensive = 3, Boost = 4, Kitchen = 5, Fireplace = 6, Override = 7, Holidays = 8	
		8	Next mode start time	RO	unsigned short	0 - 1439	Minutes	(0 - 1439 => 0:00 - 23:59); 130 => 2:10
		9	Next mode weekday	RO	unsigned char	0 - 7	Week days: None = 0, Mo = 1, Tu = 2, We = 3, Th = 4, Fr = 5, Sa = 6, Su = 7	
		10	Before been mode mask	RO	Unsigned char	0 - 31	Standby => 0, Away => 1 bit, Normal => 2 bit, Intensive => 3 bit, Boost => 4 bit	
	Temperature and flow control	11	Temperature control	R/W	unsigned char	0 - 3	Supply = 0, Extract = 1, Balance = 2, Room = 3	
		12	Flow control	R/W		0 - 3	CAV = 0, OFF = 3	Available only on units with CAV option
		39	Room sensor	R/W	unsigned char	0 - 1	Panel temperature(1) = 0, Panel temperature(2) = 1	

Group	Subgroups	Register number	Register name	Data			Values and Units	Examples and comments
				Access	Type	Range		
Main control	Control sequence	19	Stage 1	R/W	unsigned char	0 - 3	None = 0, External coil = 1, Electric heater = 2, External Dx unit = 3 ,	
		20	Stage 2	R/W	unsigned char	0 - 3	None = 0, External coil = 1, Electric heater = 2, External Dx unit = 3 ,	
		22	Coil type	R/W	unsigned char	0 - 1	Hot water = 0, Cold water = 1, Combi = 2,	
		40	Icing protection	R/W	unsigned char	0 - 2	Off = 0, On = 1, External coil = 2	Only for plate heat exchanger
		41	Indoor humidity	R/W	unsigned char	-1; 10 - 90	Auto = -1, Manual = 10-90%RH	Only for plate heat exchanger
		43	Allow dehumidify with Dx	R/W	unsigned char	0-1	Off = 0, On = 1,	
	Connectivity	35	DHCP On/Off	R/W	unsigned char	0 - 1	Off = 0, On = 1	
		23-24	IP	R/W	unsigned int		default 192.168.0.60	
		25-26	Mask	R/W	unsigned int		default 255.255.255.0	
		36-37	Gateway	R/W	unsigned int		default 192.168.0.1	
		38	BACnet ID	R/W	unsigned int	0 - 4194303	default 60	
		44	Bacnet Port	R/W	unsigned short	1-65535	default 47808	
	Settings	27	Language	R/W	unsigned char	0-255	English = 0, Lithuanian = 1, Russian = 2, ...	
		28	Flow units	R/W	unsigned char	0 - 1	m ³ /h = 0, l/s = 1	Available only on units with CAV option
		42	Fire alarm restart	R/W	unsigned char	0 - 1	Manual = 0, Auto = 1	
	Time and date	29	Time, HH:MM	R/W	unsigned short	MSB 0x00 - 0x17, LSB 0x00 - 0x3B	MSB - hours, LSB - minutes	0x0B36 => 11:54
		30	Year	R/W	unsigned short	2017 - 2035	Year	0x07E0 => 2016
		31	Month/Day	R/W	unsigned short	MSB 0x01 - 0x0C, LSB 0x01 - 0x1F	MSB - month, LSB - day	0x020C => Feb12
		32	Week day	RO	unsigned char	1 - 7	Mo = 1, Tu = 2, We = 3, Th = 4, Fr = 5, Sa = 6, Su = 7	
		33-34	Time since 1970	RO	unsigned int	1483228800 - 2051222400	based on seconds since standard epoch of 1/1/1970	1456329600 => 2016.02.24 16:00:00
Mode settings	Away	100-101	Supply flow	R/W	unsigned int	0 - 200000	%	
		102-103	Extract flow	R/W	unsigned int	0 - 200000	%	
		104	Setpoint	R/W	signed short	50 - 400	x10 C	
		105	Heating	R/W	unsigned char	0 - 1	Off = 0, On = 1	
		159	Humidity setpoint	R/W	unsigned char	RH: 10-90	%	
	Normal	106-107	Supply flow	R/W	unsigned int	0 - 200000	%	
		108-109	Extract flow	R/W	unsigned int	0 - 200000	%	
		110	Setpoint	R/W	signed short	50 - 400	x10 C	
		111	Heating	R/W	unsigned char	0 - 1	Off = 0, On = 1	
		160	Humidity setpoint	R/W	unsigned char	RH: 10-90	%	
	Intensive	112-113	Supply flow	R/W	unsigned int	0 - 200000	%	
		114-115	Extract flow	R/W	unsigned int	0 - 200000	%	
		116	Setpoint	R/W	signed short	50 - 400	x10 C	
		117	Heating	R/W	unsigned char	0 - 1	Off = 0, On = 1	
		161	Humidity setpoint	R/W	unsigned char	RH: 10-90	%	

Group	Subgroups	Register number	Register name	Data			Values and Units	Examples and comments
				Access	Type	Range		
Modes settings	Boost	118-119	Supply flow	R/W	unsigned int	0 - 200000	%	
		120-121	Extract flow	R/W	unsigned int	0 - 200000	%	
		122	Setpoint	R/W	signed short	50 - 400	x10 C	
		123	Heating	R/W	unsigned char	0 - 1	Off = 0, On = 1	
		162	Humidity setpoint	R/W	unsigned char	RH: 10-90	%	
	Kitchen	124-125	Supply flow	R/W	unsigned int	0 - 200000	%	
		126-127	Extract flow	R/W	unsigned int	0 - 200000	%	
		128	Setpoint	R/W	signed short	50 - 400	x10 C	
		129	Heating	R/W	unsigned char	0 - 1	Off = 0, On = 1	
		130	Timer time	R/W	unsigned short	0 - 300	Minutes	
	Fireplace	131-132	Supply flow	R/W	unsigned int	0 - 200000	%	
		133-134	Extract flow	R/W	unsigned int	0 - 200000	%	
		135	Setpoint	R/W	signed short	50 - 400	x10 C	
		136	Heating	R/W	unsigned char	0 - 1	Off = 0, On = 1	
		137	Timer time	R/W	unsigned short	0 - 300	Minutes	
	Override	138-139	Supply flow	R/W	unsigned int	0 - 200000	%	
		140-141	Extract flow	R/W	unsigned int	0 - 200000	%	
		142	Setpoint	R/W	signed short	50 - 400	x10 C	
		143	Heating	R/W	unsigned char	0 - 1	Off = 0, On = 1	
		144	Mode	R/W	unsigned char	0 - 2	All time = 0, If on = 1, If off = 2	
		145	Timer time	R/W	unsigned short	0 - 300	Minutes	
		157	Delayed start	R/W	unsigned char	0 - 10	Minutes	
		158	Delayed stop	R/W	unsigned char	0 - 30	Minutes	
	Holidays	146	Microventilation	R/W	unsigned char	1 - 4	Once per day = 1, Twice per day = 2, Thrice per day = 3, Four times per day = 4,	
		147	Setpoint	R/W	signed short	50 - 400	x10 C	
		148	Heating	R/W	unsigned char	0 - 1	Off = 0, On = 1	
		149-150	From Day/Month	R/W	unsigned int	1483228800 - 2051222400	based on seconds since standard epoch of 1/1/1970	1456329600 => 2016.02.24 16:00:00
		151-152	Till Day/Month	R/W	unsigned int	1483228800 - 2051222400	based on seconds since standard epoch of 1/1/1970	1456329600 => 2016.02.24 16:00:00
		153	Year, from	R/W	unsigned short	2017 - 2035		
		154	Month/Day, from	R/W	unsigned short	MSB 0x01 - 0x0C, LSB 0x01 - 0x1F	MSB = month, LSB = day	0x020C => Feb12
		155	Year, till	R/W	unsigned short	2017 - 2035		
		156	Month/Day, till	R/W	unsigned short	MSB 0x01 - 0x0C, LSB 0x01 - 0x1F	MSB = month, LSB = day	0x020C => Feb12
Eco	Eco	200	Minimum supply air temperature	R/W	unsigned short	50 - 400	x10 C	
		201	Maximum supply air temperature	R/W	unsigned short	50 - 400	x10 C	
		202	Free heating/cooling	R/W	unsigned char	0 - 1	Off = 0, On = 1	
		203	Heating enable denied	R/W	unsigned char	0 - 1	Off = 0, On = 1	
		204	Cooling enable denied	R/W	unsigned char	0 - 1	Off = 0, On = 1	
		217	Non stop recuperation	R/W	unsigned char	0 - 1	Off = 0, On = 1	

Group	Subgroups	Register number	Register name	Data			Values and Units	Examples and comments
				Access	Type	Range		
Air quality	Air quality	205	Air quality Enable	R/W	unsigned char	0 - 1	Disabled = 0, Enabled = 1	
		206	Temperature setpoint	R/W	signed short	50 - 400	x10 C	
		207	Air quality setpoint	R/W	unsigned short	CO2: 0 - 2000, VOC: 0 - 100,	ppm, %	
		208	Humidity setpoint	R/W	unsigned short	RH: 0 - 100,	%	
		209	Air quality minimum intensivity	R/W	unsigned char	0, 20 - 100	%	
		210	Air quality maximum intensivity	R/W	unsigned char	0, 20 - 100	%	
		211	Air quality heating	R/W	unsigned char	0 - 1	Off = 0, On = 1	
		212	Air quality check period	R/W	unsigned char	1 - 24	Hours	
		213	Air quality sensor type B8	R/W	unsigned char	0 - 3	None = 0, CO2 = 1, VOC = 2, RH = 3	
		215	Humidity control	R/W	unsigned char	0-1	Disabled = 0, Enabled = 1	
		216	Outdoor humidity	R/W	unsigned char	0-2	None = 0, Sensor = 1	
Scheduler	Stay at home	Operation program 1	Weekday mask	R/W	unsigned char	0b00000000 - 0b01111111	Mo => 0 bit, Tu => 1 bit, We => 2 bit, Th => 3 bit, Fr => 4 bit, Sa => 5 bit, Su => 6 bit	
Scheduler	Stay at home	Operation program 1	Event 1	R/W	unsigned char	0 - 4	Standby = 0, Away = 1, Normal = 2, Intensive = 3, Boost = 4	
Scheduler	Stay at home	Operation program 1	Event 2	R/W	unsigned char	0 - 4	Standby = 0, Away = 1, Normal = 2, Intensive = 3, Boost = 4	
Scheduler	Stay at home	Operation program 1	Event 3	R/W	unsigned char	0 - 4	Standby = 0, Away = 1, Normal = 2, Intensive = 3, Boost = 4	
Scheduler	Stay at home	Operation program 1	Event 4	R/W	unsigned char	0 - 4	Standby = 0, Away = 1, Normal = 2, Intensive = 3, Boost = 4	
Scheduler	Stay at home	Operation program 1	Event 5	R/W	unsigned char	0 - 4	Standby = 0, Away = 1, Normal = 2, Intensive = 3, Boost = 4	

Group	Subgroups	Register number	Register name	Data			Values and Units	Examples and comments
				Access	Type	Range		
Scheduler	Stay at home	Weekday mask	316	Weekday mask	R/W	unsigned char	0b00000000-0b01111111	Mo => 0 bit, Tu => 1 bit, We => 2 bit, Th => 3 bit, Fr => 4 bit, Sa => 5 bit, Su => 6 bit
			317	Mode	R/W	unsigned char	0 - 4	Standby = 0, Away = 1, Normal = 2, Intensive = 3, Boost = 4
			318	Start time	R/W	unsigned short	0:00 - 23:59	MSB - hours, LSB - minutes 0x0805 => 8:05
			319	Stop time	R/W	unsigned short	0:00 - 23:59	MSB - hours, LSB - minutes 0x0805 => 8:05
		Event 2	320	Mode	R/W	unsigned char	0 - 4	Standby = 0, Away = 1, Normal = 2, Intensive = 3, Boost = 4
			321	Start time	R/W	unsigned short	0:00 - 23:59	MSB - hours, LSB - minutes 0x0805 => 8:05
			322	Stop time	R/W	unsigned short	0:00 - 23:59	MSB - hours, LSB - minutes 0x0805 => 8:05
		Event 3	323	Mode	R/W	unsigned char	0 - 4	Standby = 0, Away = 1, Normal = 2, Intensive = 3, Boost = 4
			324	Start time	R/W	unsigned short	0:00 - 23:59	MSB - hours, LSB - minutes 0x0805 => 8:05
			325	Stop time	R/W	unsigned short	0:00 - 23:59	MSB - hours, LSB - minutes 0x0805 => 8:05
		Event 4	326	Mode	R/W	unsigned char	0 - 4	Standby = 0, Away = 1, Normal = 2, Intensive = 3, Boost = 4
			327	Start time	R/W	unsigned short	0:00 - 23:59	MSB - hours, LSB - minutes 0x0805 => 8:05
			328	Stop time	R/W	unsigned short	0:00 - 23:59	MSB - hours, LSB - minutes 0x0805 => 8:05
		Event 5	329	Mode	R/W	unsigned char	0 - 4	Standby = 0, Away = 1, Normal = 2, Intensive = 3, Boost = 4
			330	Start time	R/W	unsigned short	0:00 - 23:59	MSB - hours, LSB - minutes 0x0805 => 8:05
			331	Stop time	R/W	unsigned short	0:00 - 23:59	MSB - hours, LSB - minutes 0x0805 => 8:05
	Operation program 3	Weekday mask	332	Weekday mask	R/W	unsigned char	0b00000000-0b01111111	Mo => 0 bit, Tu => 1 bit, We => 2 bit, Th => 3 bit, Fr => 4 bit, Sa => 5 bit, Su => 6 bit
		Event 1	333	Mode	R/W	unsigned char	0 - 4	Standby = 0, Away = 1, Normal = 2, Intensive = 3, Boost = 4
			334	Start time	R/W	unsigned short	0:00 - 23:59	MSB - hours, LSB - minutes 0x0805 => 8:05
			335	Stop time	R/W	unsigned short	0:00 - 23:59	MSB - hours, LSB - minutes 0x0805 => 8:05
		Event 2	336	Mode	R/W	unsigned char	0 - 4	Standby = 0, Away = 1, Normal = 2, Intensive = 3, Boost = 4
			337	Start time	R/W	unsigned short	0:00 - 23:59	MSB - hours, LSB - minutes 0x0805 => 8:05
			338	Stop time	R/W	unsigned short	0:00 - 23:59	MSB - hours, LSB - minutes 0x0805 => 8:05

Group	Subgroups	Register number	Register name	Data			Values and Units	Examples and comments
				Access	Type	Range		
Scheduler	Stay at home	Event 3	339 Mode	R/W	unsigned char	0 - 4	Standby = 0, Away = 1, Normal = 2, Intensive = 3, Boost = 4	
			340 Start time	R/W	unsigned short	0:00 - 23:59	MSB - hours, LSB - minutes	0x0805 => 8:05
			341 Stop time	R/W	unsigned short	0:00 - 23:59	MSB - hours, LSB - minutes	0x0805 => 8:05
		Event 4	342 Mode	R/W	unsigned char	0 - 4	Standby = 0, Away = 1, Normal = 2, Intensive = 3, Boost = 4	
			343 Start time	R/W	unsigned short	0:00 - 23:59	MSB - hours, LSB - minutes	0x0805 => 8:05
			344 Stop time	R/W	unsigned short	0:00 - 23:59	MSB - hours, LSB - minutes	0x0805 => 8:05
		Event 5	345 Mode	R/W	unsigned char	0 - 4	Standby = 0, Away = 1, Normal = 2, Intensive = 3, Boost = 4	
			346 Start time	R/W	unsigned short	0:00 - 23:59	MSB - hours, LSB - minutes	0x0805 => 8:05
			347 Stop time	R/W	unsigned short	0:00 - 23:59	MSB - hours, LSB - minutes	0x0805 => 8:05
		Weekday mask	348 Weekday mask	R/W	unsigned char	0b00000000-0b01111111	Mo => 0 bit, Tu => 1 bit, We => 2 bit, Th => 3 bit, Fr => 4 bit, Sa => 5 bit, Su => 6 bit	
	Operation program 4	Event 1	349 Mode	R/W	unsigned char	0 - 4	Standby = 0, Away = 1, Normal = 2, Intensive = 3, Boost = 4	
			350 Start time	R/W	unsigned short	0:00 - 23:59	MSB - hours, LSB - minutes	0x0805 => 8:05
			351 Stop time	R/W	unsigned short	0:00 - 23:59	MSB - hours, LSB - minutes	0x0805 => 8:05
		Event 2	352 Mode	R/W	unsigned char	0 - 4	Standby = 0, Away = 1, Normal = 2, Intensive = 3, Boost = 4	
			353 Start time	R/W	unsigned short	0:00 - 23:59	MSB - hours, LSB - minutes	0x0805 => 8:05
			354 Stop time	R/W	unsigned short	0:00 - 23:59	MSB - hours, LSB - minutes	0x0805 => 8:05
		Event 3	355 Mode	R/W	unsigned char	0 - 4	Standby = 0, Away = 1, Normal = 2, Intensive = 3, Boost = 4	
			356 Start time	R/W	unsigned short	0:00 - 23:59	MSB - hours, LSB - minutes	0x0805 => 8:05
			357 Stop time	R/W	unsigned short	0:00 - 23:59	MSB - hours, LSB - minutes	0x0805 => 8:05
		Event 4	358 Mode	R/W	unsigned char	0 - 4	Standby = 0, Away = 1, Normal = 2, Intensive = 3, Boost = 4	
			359 Start time	R/W	unsigned short	0:00 - 23:59	MSB - hours, LSB - minutes	0x0805 => 8:05
			360 Stop time	R/W	unsigned short	0:00 - 23:59	MSB - hours, LSB - minutes	0x0805 => 8:05
		Event 5	361 Mode	R/W	unsigned char	0 - 4	Standby = 0, Away = 1, Normal = 2, Intensive = 3, Boost = 4	
			362 Start time	R/W	unsigned short	0:00 - 23:59	MSB - hours, LSB - minutes	0x0805 => 8:05
			363 Stop time	R/W	unsigned short	0:00 - 23:59	MSB - hours, LSB - minutes	0x0805 => 8:05

Group	Subgroups	Register number	Register name	Data			Values and Units	Examples and comments				
				Access	Type	Range						
Scheduler	Working week	Operation program 1	Weekday mask	364	Weekday mask	R/W	unsigned char	0b00000000 - 0b01111111	Mo => 0 bit, Tu => 1 bit, We => 2 bit, Th => 3 bit, Fr => 4 bit, Sa => 5 bit, Su => 6 bit			
				Event 1	365	Mode	R/W	unsigned char	0 - 4	Standby = 0, Away = 1, Normal =2, Intensive =3, Boost = 4		
					366	Start time	R/W	unsigned short	0:00 - 23:59	MSB - hours, LSB - minutes	0x0805 => 8:05	
					367	Stop time	R/W	unsigned short	0:00 - 23:59	MSB - hours, LSB - minutes	0x0805 => 8:05	
			Event 2	368	Mode	R/W	unsigned char	0 - 4	Standby = 0, Away = 1, Normal =2, Intensive =3, Boost = 4			
				369	Start time	R/W	unsigned short	0:00 - 23:59	MSB - hours, LSB - minutes	0x0805 => 8:05		
				370	Stop time	R/W	unsigned short	0:00 - 23:59	MSB - hours, LSB - minutes	0x0805 => 8:05		
			Event 3	371	Mode	R/W	unsigned char	0 - 4	Standby = 0, Away = 1, Normal =2, Intensive =3, Boost = 4			
				372	Start time	R/W	unsigned short	0:00 - 23:59	MSB - hours, LSB - minutes	0x0805 => 8:05		
				373	Stop time	R/W	unsigned short	0:00 - 23:59	MSB - hours, LSB - minutes	0x0805 => 8:05		
			Event 4	374	Mode	R/W	unsigned char	0 - 4	Standby = 0, Away = 1, Normal =2, Intensive =3, Boost = 4			
				375	Start time	R/W	unsigned short	0:00 - 23:59	MSB - hours, LSB - minutes	0x0805 => 8:05		
				376	Stop time	R/W	unsigned short	0:00 - 23:59	MSB - hours, LSB - minutes	0x0805 => 8:05		
			Event 5	377	Mode	R/W	unsigned char	0 - 4	Standby = 0, Away = 1, Normal =2, Intensive =3, Boost = 4			
				378	Start time	R/W	unsigned short	0:00 - 23:59	MSB - hours, LSB - minutes	0x0805 => 8:05		
				379	Stop time	R/W	unsigned short	0:00 - 23:59	MSB - hours, LSB - minutes	0x0805 => 8:05		
			Operation program 2	Weekday mask	380	Weekday mask	R/W	unsigned char	0b00000000- 0b01111111	Mo => 0 bit, Tu => 1 bit, We => 2 bit, Th => 3 bit, Fr => 4 bit, Sa => 5 bit, Su => 6 bit		
					Event 1	381	Mode	R/W	unsigned char	0 - 4	Standby = 0, Away = 1, Normal =2, Intensive =3, Boost = 4	
						382	Start time	R/W	unsigned short	0:00 - 23:59	MSB - hours, LSB - minutes	0x0805 => 8:05
						383	Stop time	R/W	unsigned short	0:00 - 23:59	MSB - hours, LSB - minutes	0x0805 => 8:05
					Event 2	384	Mode	R/W	unsigned char	0 - 4	Standby = 0, Away = 1, Normal =2, Intensive =3, Boost = 4	
						385	Start time	R/W	unsigned short	0:00 - 23:59	MSB - hours, LSB - minutes	0x0805 => 8:05
						386	Stop time	R/W	unsigned short	0:00 - 23:59	MSB - hours, LSB - minutes	0x0805 => 8:05

Group	Subgroups	Register number	Register name	Data			Values and Units	Examples and comments
				Access	Type	Range		
Scheduler	Working week	Event 3	387 Mode	R/W	unsigned char	0 - 4	Standby = 0, Away = 1, Normal = 2, Intensive = 3, Boost = 4	
			388 Start time	R/W	unsigned short	0:00 - 23:59	MSB - hours, LSB - minutes	0x0805 => 8:05
			389 Stop time	R/W	unsigned short	0:00 - 23:59	MSB - hours, LSB - minutes	0x0805 => 8:05
		Event 4	390 Mode	R/W	unsigned char	0 - 4	Standby = 0, Away = 1, Normal = 2, Intensive = 3, Boost = 4	
			391 Start time	R/W	unsigned short	0:00 - 23:59	MSB - hours, LSB - minutes	0x0805 => 8:05
			392 Stop time	R/W	unsigned short	0:00 - 23:59	MSB - hours, LSB - minutes	0x0805 => 8:05
		Event 5	393 Mode	R/W	unsigned char	0 - 4	Standby = 0, Away = 1, Normal = 2, Intensive = 3, Boost = 4	
			394 Start time	R/W	unsigned short	0:00 - 23:59	MSB - hours, LSB - minutes	0x0805 => 8:05
			395 Stop time	R/W	unsigned short	0:00 - 23:59	MSB - hours, LSB - minutes	0x0805 => 8:05
	Operation program 3	Weekday mask	396 Weekday mask	R/W	unsigned char	0b00000000- 0b01111111	Mo => 0 bit, Tu => 1 bit, We => 2 bit, Th => 3 bit, Fr => 4 bit, Sa => 5 bit, Su => 6 bit	
		Event 1	397 Mode	R/W	unsigned char	0 - 4	Standby = 0, Away = 1, Normal = 2, Intensive = 3, Boost = 4	
			398 Start time	R/W	unsigned short	0:00 - 23:59	MSB - hours, LSB - minutes	0x0805 => 8:05
			399 Stop time	R/W	unsigned short	0:00 - 23:59	MSB - hours, LSB - minutes	0x0805 => 8:05
		Event 2	400 Mode	R/W	unsigned char	0 - 4	Standby = 0, Away = 1, Normal = 2, Intensive = 3, Boost = 4	
			401 Start time	R/W	unsigned short	0:00 - 23:59	MSB - hours, LSB - minutes	0x0805 => 8:05
			402 Stop time	R/W	unsigned short	0:00 - 23:59	MSB - hours, LSB - minutes	0x0805 => 8:05
		Event 3	403 Mode	R/W	unsigned char	0 - 4	Standby = 0, Away = 1, Normal = 2, Intensive = 3, Boost = 4	
			404 Start time	R/W	unsigned short	0:00 - 23:59	MSB - hours, LSB - minutes	0x0805 => 8:05
			405 Stop time	R/W	unsigned short	0:00 - 23:59	MSB - hours, LSB - minutes	0x0805 => 8:05
		Event 4	406 Mode	R/W	unsigned char	0 - 4	Standby = 0, Away = 1, Normal = 2, Intensive = 3, Boost = 4	
			407 Start time	R/W	unsigned short	0:00 - 23:59	MSB - hours, LSB - minutes	0x0805 => 8:05
			408 Stop time	R/W	unsigned short	0:00 - 23:59	MSB - hours, LSB - minutes	0x0805 => 8:05
		Event 5	409 Mode	R/W	unsigned char	0 - 4	Standby = 0, Away = 1, Normal = 2, Intensive = 3, Boost = 4	
			410 Start time	R/W	unsigned short	0:00 - 23:59	MSB - hours, LSB - minutes	0x0805 => 8:05
			411 Stop time	R/W	unsigned short	0:00 - 23:59	MSB - hours, LSB - minutes	0x0805 => 8:05

Group	Subgroups		Register number	Register name	Data			Values and Units	Examples and comments
					Access	Type	Range		
Scheduler	Working week	Operation program 4	Weekday mask						
			412	Weekday mask	R/W	unsigned char	0b00000000-0b01111111	Mo => 0 bit, Tu => 1 bit, We => 2 bit, Th => 3 bit, Fr => 4 bit, Sa => 5 bit, Su => 6 bit	
			413	Mode	R/W	unsigned char	0 - 4	Standby = 0, Away = 1, Normal = 2, Intensive = 3, Boost = 4	
			414	Start time	R/W	unsigned short	0:00 - 23:59	MSB - hours, LSB - minutes	0x0805 => 8:05
			415	Stop time	R/W	unsigned short	0:00 - 23:59	MSB - hours, LSB - minutes	0x0805 => 8:05
			416	Mode	R/W	unsigned char	0 - 4	Standby = 0, Away = 1, Normal = 2, Intensive = 3, Boost = 4	
			417	Start time	R/W	unsigned short	0:00 - 23:59	MSB - hours, LSB - minutes	0x0805 => 8:05
			418	Stop time	R/W	unsigned short	0:00 - 23:59	MSB - hours, LSB - minutes	0x0805 => 8:05
			419	Mode	R/W	unsigned char	0 - 4	Standby = 0, Away = 1, Normal = 2, Intensive = 3, Boost = 4	
			420	Start time	R/W	unsigned short	0:00 - 23:59	MSB - hours, LSB - minutes	0x0805 => 8:05
			421	Stop time	R/W	unsigned short	0:00 - 23:59	MSB - hours, LSB - minutes	0x0805 => 8:05
			422	Mode	R/W	unsigned char	0 - 4	Standby = 0, Away = 1, Normal = 2, Intensive = 3, Boost = 4	
			423	Start time	R/W	unsigned short	0:00 - 23:59	MSB - hours, LSB - minutes	0x0805 => 8:05
			424	Stop time	R/W	unsigned short	0:00 - 23:59	MSB - hours, LSB - minutes	0x0805 => 8:05
			425	Mode	R/W	unsigned char	0 - 4	Standby = 0, Away = 1, Normal = 2, Intensive = 3, Boost = 4	
			426	Start time	R/W	unsigned short	0:00 - 23:59	MSB - hours, LSB - minutes	0x0805 => 8:05
			427	Stop time	R/W	unsigned short	0:00 - 23:59	MSB - hours, LSB - minutes	0x0805 => 8:05
	Office	Operation program 1	Weekday mask						
			428	Weekday mask	R/W	unsigned char	0b00000000-0b01111111	Mo => 0 bit, Tu => 1 bit, We => 2 bit, Th => 3 bit, Fr => 4 bit, Sa => 5 bit, Su => 6 bit	
			429	Mode	R/W	unsigned char	0 - 4	Standby = 0, Away = 1, Normal = 2, Intensive = 3, Boost = 4	
			430	Start time	R/W	unsigned short	0:00 - 23:59	MSB - hours, LSB - minutes	0x0805 => 8:05
			431	Stop time	R/W	unsigned short	0:00 - 23:59	MSB - hours, LSB - minutes	0x0805 => 8:05
			432	Mode	R/W	unsigned char	0 - 4	Standby = 0, Away = 1, Normal = 2, Intensive = 3, Boost = 4	
			433	Start time	R/W	unsigned short	0:00 - 23:59	MSB - hours, LSB - minutes	0x0805 => 8:05
			434	Stop time	R/W	unsigned short	0:00 - 23:59	MSB - hours, LSB - minutes	0x0805 => 8:05

Group	Subgroups	Register number	Register name	Data			Values and Units	Examples and comments
				Access	Type	Range		
Scheduler	Office	Event 3	435 Mode	R/W	unsigned char	0 - 4	Standby = 0, Away = 1, Normal = 2, Intensive = 3, Boost = 4	
			436 Start time	R/W	unsigned short	0:00 - 23:59	MSB - hours, LSB - minutes	0x0805 => 8:05
			437 Stop time	R/W	unsigned short	0:00 - 23:59	MSB - hours, LSB - minutes	0x0805 => 8:05
		Event 4	438 Mode	R/W	unsigned char	0 - 4	Standby = 0, Away = 1, Normal = 2, Intensive = 3, Boost = 4	
			439 Start time	R/W	unsigned short	0:00 - 23:59	MSB - hours, LSB - minutes	0x0805 => 8:05
			440 Stop time	R/W	unsigned short	0:00 - 23:59	MSB - hours, LSB - minutes	0x0805 => 8:05
		Event 5	441 Mode	R/W	unsigned char	0 - 4	Standby = 0, Away = 1, Normal = 2, Intensive = 3, Boost = 4	
			442 Start time	R/W	unsigned short	0:00 - 23:59	MSB - hours, LSB - minutes	0x0805 => 8:05
			443 Stop time	R/W	unsigned short	0:00 - 23:59	MSB - hours, LSB - minutes	0x0805 => 8:05
		Weekday mask	444 Weekday mask	R/W	unsigned char	0b00000000- 0b01111111	Mo => 0 bit, Tu => 1 bit, We => 2 bit, Th => 3 bit, Fr => 4 bit, Sa => 5 bit, Su => 6 bit	
		Event 1	445 Mode	R/W	unsigned char	0 - 4	Standby = 0, Away = 1, Normal = 2, Intensive = 3, Boost = 4	
			446 Start time	R/W	unsigned short	0:00 - 23:59	MSB - hours, LSB - minutes	0x0805 => 8:05
			447 Stop time	R/W	unsigned short	0:00 - 23:59	MSB - hours, LSB - minutes	0x0805 => 8:05
	Operation program 2	Event 2	448 Mode	R/W	unsigned char	0 - 4	Standby = 0, Away = 1, Normal = 2, Intensive = 3, Boost = 4	
			449 Start time	R/W	unsigned short	0:00 - 23:59	MSB - hours, LSB - minutes	0x0805 => 8:05
			450 Stop time	R/W	unsigned short	0:00 - 23:59	MSB - hours, LSB - minutes	0x0805 => 8:05
		Event 3	451 Mode	R/W	unsigned char	0 - 4	Standby = 0, Away = 1, Normal = 2, Intensive = 3, Boost = 4	
			452 Start time	R/W	unsigned short	0:00 - 23:59	MSB - hours, LSB - minutes	0x0805 => 8:05
			453 Stop time	R/W	unsigned short	0:00 - 23:59	MSB - hours, LSB - minutes	0x0805 => 8:05
		Event 4	454 Mode	R/W	unsigned char	0 - 4	Standby = 0, Away = 1, Normal = 2, Intensive = 3, Boost = 4	
			455 Start time	R/W	unsigned short	0:00 - 23:59	MSB - hours, LSB - minutes	0x0805 => 8:05
			456 Stop time	R/W	unsigned short	0:00 - 23:59	MSB - hours, LSB - minutes	0x0805 => 8:05
		Event 5	457 Mode	R/W	unsigned char	0 - 4	Standby = 0, Away = 1, Normal = 2, Intensive = 3, Boost = 4	
			458 Start time	R/W	unsigned short	0:00 - 23:59	MSB - hours, LSB - minutes	0x0805 => 8:05
			459 Stop time	R/W	unsigned short	0:00 - 23:59	MSB - hours, LSB - minutes	0x0805 => 8:05

Group	Subgroups	Register number	Register name	Data			Values and Units	Examples and comments		
				Access	Type	Range				
Scheduler	Office	Operation program 3	Weekday mask	460	Weekday mask	R/W	unsigned char	0b00000000-0b01111111	Mo => 0 bit, Tu => 1 bit, We => 2 bit, Th => 3 bit, Fr => 4 bit, Sa => 5 bit, Su => 6 bit	
			Event 1	461	Mode	R/W	unsigned char	0 - 4	Standby = 0, Away = 1, Normal =2, Intensive =3, Boost = 4	
				462	Start time	R/W	unsigned short	0:00 - 23:59	MSB - hours, LSB - minutes	0x0805 => 8:05
				463	Stop time	R/W	unsigned short	0:00 - 23:59	MSB - hours, LSB - minutes	0x0805 => 8:05
			Event 2	464	Mode	R/W	unsigned char	0 - 4	Standby = 0, Away = 1, Normal =2, Intensive =3, Boost = 4	
				465	Start time	R/W	unsigned short	0:00 - 23:59	MSB - hours, LSB - minutes	0x0805 => 8:05
				466	Stop time	R/W	unsigned short	0:00 - 23:59	MSB - hours, LSB - minutes	0x0805 => 8:05
			Event 3	467	Mode	R/W	unsigned char	0 - 4	Standby = 0, Away = 1, Normal =2, Intensive =3, Boost = 4	
				468	Start time	R/W	unsigned short	0:00 - 23:59	MSB - hours, LSB - minutes	0x0805 => 8:05
				469	Stop time	R/W	unsigned short	0:00 - 23:59	MSB - hours, LSB - minutes	0x0805 => 8:05
			Event 4	470	Mode	R/W	unsigned char	0 - 4	Standby = 0, Away = 1, Normal =2, Intensive =3, Boost = 4	
				471	Start time	R/W	unsigned short	0:00 - 23:59	MSB - hours, LSB - minutes	0x0805 => 8:05
				472	Stop time	R/W	unsigned short	0:00 - 23:59	MSB - hours, LSB - minutes	0x0805 => 8:05
			Event 5	473	Mode	R/W	unsigned char	0 - 4	Standby = 0, Away = 1, Normal =2, Intensive =3, Boost = 4	
				474	Start time	R/W	unsigned short	0:00 - 23:59	MSB - hours, LSB - minutes	0x0805 => 8:05
			475	Stop time	R/W	unsigned short	0:00 - 23:59	MSB - hours, LSB - minutes	0x0805 => 8:05	
		Operation program 4	Weekday mask	476	Weekday mask	R/W	unsigned char	0b00000000-0b01111111	Mo => 0 bit, Tu => 1 bit, We => 2 bit, Th => 3 bit, Fr => 4 bit, Sa => 5 bit, Su => 6 bit	
			Event 1	477	Mode	R/W	unsigned char	0 - 4	Standby = 0, Away = 1, Normal =2, Intensive =3, Boost = 4	
				478	Start time	R/W	unsigned short	0:00 - 23:59	MSB - hours, LSB - minutes	0x0805 => 8:05
				479	Stop time	R/W	unsigned short	0:00 - 23:59	MSB - hours, LSB - minutes	0x0805 => 8:05
			Event 2	480	Mode	R/W	unsigned char	0 - 4	Standby = 0, Away = 1, Normal =2, Intensive =3, Boost = 4	
				481	Start time	R/W	unsigned short	0:00 - 23:59	MSB - hours, LSB - minutes	0x0805 => 8:05
				482	Stop time	R/W	unsigned short	0:00 - 23:59	MSB - hours, LSB - minutes	0x0805 => 8:05

Group	Subgroups	Register number	Register name	Data			Values and Units	Examples and comments
				Access	Type	Range		
Scheduler	Office	Event 3	483 Mode	R/W	unsigned char	0 - 4	Standby = 0, Away = 1, Normal = 2, Intensive = 3, Boost = 4	
			484 Start time	R/W	unsigned short	0:00 - 23:59	MSB - hours, LSB - minutes	0x0805 => 8:05
			485 Stop time	R/W	unsigned short	0:00 - 23:59	MSB - hours, LSB - minutes	0x0805 => 8:05
		Event 4	486 Mode	R/W	unsigned char	0 - 4	Standby = 0, Away = 1, Normal = 2, Intensive = 3, Boost = 4	
			487 Start time	R/W	unsigned short	0:00 - 23:59	MSB - hours, LSB - minutes	0x0805 => 8:05
			488 Stop time	R/W	unsigned short	0:00 - 23:59	MSB - hours, LSB - minutes	0x0805 => 8:05
		Event 5	489 Mode	R/W	unsigned char	0 - 4	Standby = 0, Away = 1, Normal = 2, Intensive = 3, Boost = 4	
			490 Start time	R/W	unsigned short	0:00 - 23:59	MSB - hours, LSB - minutes	0x0805 => 8:05
			491 Stop time	R/W	unsigned short	0:00 - 23:59	MSB - hours, LSB - minutes	0x0805 => 8:05
	Custom	Weekday mask	492 Weekday mask	R/W	unsigned char	0b00000000 - 0b01111111	Mo => 0 bit, Tu => 1 bit, We => 2 bit, Th => 3 bit, Fr => 4 bit, Sa => 5 bit, Su => 6 bit	
		Event 1	493 Mode	R/W	unsigned char	0 - 4	Standby = 0, Away = 1, Normal = 2, Intensive = 3, Boost = 4	
			494 Start time	R/W	unsigned short	0:00 - 23:59	MSB - hours, LSB - minutes	0x0805 => 8:05
			495 Stop time	R/W	unsigned short	0:00 - 23:59	MSB - hours, LSB - minutes	0x0805 => 8:05
		Event 2	496 Mode	R/W	unsigned char	0 - 4	Standby = 0, Away = 1, Normal = 2, Intensive = 3, Boost = 4	
			497 Start time	R/W	unsigned short	0:00 - 23:59	MSB - hours, LSB - minutes	0x0805 => 8:05
			498 Stop time	R/W	unsigned short	0:00 - 23:59	MSB - hours, LSB - minutes	0x0805 => 8:05
		Event 3	499 Mode	R/W	unsigned char	0 - 4	Standby = 0, Away = 1, Normal = 2, Intensive = 3, Boost = 4	
			500 Start time	R/W	unsigned short	0:00 - 23:59	MSB - hours, LSB - minutes	0x0805 => 8:05
			501 Stop time	R/W	unsigned short	0:00 - 23:59	MSB - hours, LSB - minutes	0x0805 => 8:05
		Event 4	502 Mode	R/W	unsigned char	0 - 4	Standby = 0, Away = 1, Normal = 2, Intensive = 3, Boost = 4	
			503 Start time	R/W	unsigned short	0:00 - 23:59	MSB - hours, LSB - minutes	0x0805 => 8:05
			504 Stop time	R/W	unsigned short	0:00 - 23:59	MSB - hours, LSB - minutes	0x0805 => 8:05
		Event 5	505 Mode	R/W	unsigned char	0 - 4	Standby = 0, Away = 1, Normal = 2, Intensive = 3, Boost = 4	
			506 Start time	R/W	unsigned short	0:00 - 23:59	MSB - hours, LSB - minutes	0x0805 => 8:05
			507 Stop time	R/W	unsigned short	0:00 - 23:59	MSB - hours, LSB - minutes	0x0805 => 8:05

Group	Subgroups		Register number	Register name	Data			Values and Units	Examples and comments	
					Access	Type	Range			
Scheduler	Custom	Operation program 2								
		Weekday mask	508	Weekday mask	R/W	unsigned char	0b00000000-0b01111111	Mo => 0 bit, Tu => 1 bit, We => 2 bit, Th => 3 bit, Fr => 4 bit, Sa => 5 bit, Su => 6 bit		
			Event 1	509	Mode	R/W	unsigned char	0 - 4	Standby = 0, Away = 1, Normal =2, Intensive =3, Boost = 4	
				510	Start time	R/W	unsigned short	0:00 - 23:59	MSB - hours, LSB - minutes	0x0805 => 8:05
				511	Stop time	R/W	unsigned short	0:00 - 23:59	MSB - hours, LSB - minutes	0x0805 => 8:05
		Event 2	512	Mode	R/W	unsigned char	0 - 4	Standby = 0, Away = 1, Normal =2, Intensive =3, Boost = 4		
			513	Start time	R/W	unsigned short	0:00 - 23:59	MSB - hours, LSB - minutes	0x0805 => 8:05	
			514	Stop time	R/W	unsigned short	0:00 - 23:59	MSB - hours, LSB - minutes	0x0805 => 8:05	
		Event 3	515	Mode	R/W	unsigned char	0 - 4	Standby = 0, Away = 1, Normal =2, Intensive =3, Boost = 4		
			516	Start time	R/W	unsigned short	0:00 - 23:59	MSB - hours, LSB - minutes	0x0805 => 8:05	
			517	Stop time	R/W	unsigned short	0:00 - 23:59	MSB - hours, LSB - minutes	0x0805 => 8:05	
		Event 4	518	Mode	R/W	unsigned char	0 - 4	Standby = 0, Away = 1, Normal =2, Intensive =3, Boost = 4		
			519	Start time	R/W	unsigned short	0:00 - 23:59	MSB - hours, LSB - minutes	0x0805 => 8:05	
			520	Stop time	R/W	unsigned short	0:00 - 23:59	MSB - hours, LSB - minutes	0x0805 => 8:05	
		Event 5	521	Mode	R/W	unsigned char	0 - 4	Standby = 0, Away = 1, Normal =2, Intensive =3, Boost = 4		
			522	Start time	R/W	unsigned short	0:00 - 23:59	MSB - hours, LSB - minutes	0x0805 => 8:05	
			523	Stop time	R/W	unsigned short	0:00 - 23:59	MSB - hours, LSB - minutes	0x0805 => 8:05	
		Operation program 3								
		Weekday mask	524	Weekday mask	R/W	unsigned char	0b00000000-0b01111111	Mo => 0 bit, Tu => 1 bit, We => 2 bit, Th => 3 bit, Fr => 4 bit, Sa => 5 bit, Su => 6 bit		
			Event 1	525	Mode	R/W	unsigned char	0 - 4	Standby = 0, Away = 1, Normal =2, Intensive =3, Boost = 4	
				526	Start time	R/W	unsigned short	0:00 - 23:59	MSB - hours, LSB - minutes	0x0805 => 8:05
				527	Stop time	R/W	unsigned short	0:00 - 23:59	MSB - hours, LSB - minutes	0x0805 => 8:05
			Event 2	528	Mode	R/W	unsigned char	0 - 4	Standby = 0, Away = 1, Normal =2, Intensive =3, Boost = 4	
				529	Start time	R/W	unsigned short	0:00 - 23:59	MSB - hours, LSB - minutes	0x0805 => 8:05
				530	Stop time	R/W	unsigned short	0:00 - 23:59	MSB - hours, LSB - minutes	0x0805 => 8:05

Group	Subgroups	Register number	Register name	Data			Values and Units	Examples and comments
				Access	Type	Range		
Scheduler	Custom	Event 3	531 Mode	R/W	unsigned char	0 - 4	Standby = 0, Away = 1, Normal = 2, Intensive = 3, Boost = 4	
			532 Start time	R/W	unsigned short	0:00 - 23:59	MSB - hours, LSB - minutes	0x0805 => 8:05
			533 Stop time	R/W	unsigned short	0:00 - 23:59	MSB - hours, LSB - minutes	0x0805 => 8:05
		Event 4	534 Mode	R/W	unsigned char	0 - 4	Standby = 0, Away = 1, Normal = 2, Intensive = 3, Boost = 4	
			535 Start time	R/W	unsigned short	0:00 - 23:59	MSB - hours, LSB - minutes	0x0805 => 8:05
			536 Stop time	R/W	unsigned short	0:00 - 23:59	MSB - hours, LSB - minutes	0x0805 => 8:05
		Event 5	537 Mode	R/W	unsigned char	0 - 4	Standby = 0, Away = 1, Normal = 2, Intensive = 3, Boost = 4	
			538 Start time	R/W	unsigned short	0:00 - 23:59	MSB - hours, LSB - minutes	0x0805 => 8:05
			539 Stop time	R/W	unsigned short	0:00 - 23:59	MSB - hours, LSB - minutes	0x0805 => 8:05
	Operation program 4	Weekday mask	540 Weekday mask	R/W	unsigned char	0b00000000- 0b01111111	Mo => 0 bit, Tu => 1 bit, We => 2 bit, Th => 3 bit, Fr => 4 bit, Sa => 5 bit, Su => 6 bit	
		Event 1	541 Mode	R/W	unsigned char	0 - 4	Standby = 0, Away = 1, Normal = 2, Intensive = 3, Boost = 4	
			542 Start time	R/W	unsigned short	0:00 - 23:59	MSB - hours, LSB - minutes	0x0805 => 8:05
			543 Stop time	R/W	unsigned short	0:00 - 23:59	MSB - hours, LSB - minutes	0x0805 => 8:05
		Event 2	544 Mode	R/W	unsigned char	0 - 4	Standby = 0, Away = 1, Normal = 2, Intensive = 3, Boost = 4	
			545 Start time	R/W	unsigned short	0:00 - 23:59	MSB - hours, LSB - minutes	0x0805 => 8:05
			546 Stop time	R/W	unsigned short	0:00 - 23:59	MSB - hours, LSB - minutes	0x0805 => 8:05
		Event 3	547 Mode	R/W	unsigned char	0 - 4	Standby = 0, Away = 1, Normal = 2, Intensive = 3, Boost = 4	
			548 Start time	R/W	unsigned short	0:00 - 23:59	MSB - hours, LSB - minutes	0x0805 => 8:05
			549 Stop time	R/W	unsigned short	0:00 - 23:59	MSB - hours, LSB - minutes	0x0805 => 8:05
		Event 4	550 Mode	R/W	unsigned char	0 - 4	Standby = 0, Away = 1, Normal = 2, Intensive = 3, Boost = 4	
			551 Start time	R/W	unsigned short	0:00 - 23:59	MSB - hours, LSB - minutes	0x0805 => 8:05
			552 Stop time	R/W	unsigned short	0:00 - 23:59	MSB - hours, LSB - minutes	0x0805 => 8:05
		Event 5	553 Mode	R/W	unsigned char	0 - 4	Standby = 0, Away = 1, Normal = 2, Intensive = 3, Boost = 4	
			554 Start time	R/W	unsigned short	0:00 - 23:59	MSB - hours, LSB - minutes	0x0805 => 8:05
			555 Stop time	R/W	unsigned short	0:00 - 23:59	MSB - hours, LSB - minutes	0x0805 => 8:05

Group	Subgroups	Register number	Register name	Data			Values and Units	Examples and comments
				Access	Type	Range		
Alarms	Active alarms	600	Active alarms count	R/W	unsigned char	0 - 10		Writing 0x99C6 - Active alarms reset and restore previous mode
		601	Active alarm 1 code (newest)	RO	unsigned char	1 - 127 F alarms, 129 - 255 W alarms		0x02 => 2F (MSb = 0), 0x82 => 2W (MSb = 1)
		602	Active alarm 2 code	RO	unsigned char	1 - 127 F alarms, 129 - 255 W alarms		0x02 => 2F (MSb = 0), 0x82 => 2W (MSb = 1)
		603	Active alarm 3 code	RO	unsigned char	1 - 127 F alarms, 129 - 255 W alarms		0x02 => 2F (MSb = 0), 0x82 => 2W (MSb = 1)
		604	Active alarm 4 code	RO	unsigned char	1 - 127 F alarms, 129 - 255 W alarms		0x02 => 2F (MSb = 0), 0x82 => 2W (MSb = 1)
		605	Active alarm 5 code	RO	unsigned char	1 - 127 F alarms, 129 - 255 W alarms		0x02 => 2F (MSb = 0), 0x82 => 2W (MSb = 1)
		606	Active alarm 6 code	RO	unsigned char	1 - 127 F alarms, 129 - 255 W alarms		0x02 => 2F (MSb = 0), 0x82 => 2W (MSb = 1)
		607	Active alarm 7 code	RO	unsigned char	1 - 127 F alarms, 129 - 255 W alarms		0x02 => 2F (MSb = 0), 0x82 => 2W (MSb = 1)
		608	Active alarm 8 code	RO	unsigned char	1 - 127 F alarms, 129 - 255 W alarms		0x02 => 2F (MSb = 0), 0x82 => 2W (MSb = 1)
		609	Active alarm 9 code	RO	unsigned char	1 - 127 F alarms, 129 - 255 W alarms		0x02 => 2F (MSb = 0), 0x82 => 2W (MSb = 1)
		610	Active alarm 10 code	RO	unsigned char	1 - 127 F alarms, 129 - 255 W alarms		0x02 => 2F (MSb = 0), 0x82 => 2W (MSb = 1)
	Alarms history	Alarm 1	611	Alarm history count	RO	unsigned char	0 - 50	
			612	Alarm (newest) year	RO	unsigned short	2016 - 2250	Year
			613	Alarm (newest) month-day	RO	unsigned short	01.01 - 12.31	Month and day
			614	Alarm (newest) time	RO	unsigned short	0:00 - 23:59	Hours and minutes
			615	Alarm (newest) seconds	RO	unsigned char	0 - 59	Seconds
		Alarm 2	616	Alarm (newest) code	RO	unsigned char	1 - 127 F alarms, 129 - 255 W alarms	0x02 => 2F (MSb = 0), 0x82 => 2W (MSb = 1)
			617	Alarm year	RO	unsigned short	2016 - 2250	Year
			618	Alarm month-day	RO	unsigned short	01.01 - 12.31	Month and day
			619	Alarm time	RO	unsigned short	0:00 - 23:59	Hours and minutes
			620	Alarm seconds	RO	unsigned char	0 - 59	Seconds
			621	Alarm code	RO	unsigned char	1 - 127 F alarms, 129 - 255 W alarms	0x02 => 2F (MSb = 0), 0x82 => 2W (MSb = 1)

Group	Subgroups	Register number	Register name	Data			Values and Units	Examples and comments
				Access	Type	Range		
Alarms	Alarms history	Alarm 3	622 Alarm year	RO	unsigned short	2016 - 2250	Year	
			623 Alarm month-day	RO	unsigned short	01.01 - 12.31	Month and day	0x020C => Feb12
			624 Alarm time	RO	unsigned short	0:00 - 23:59	Hours and minutes	0x0805 => 8:05
			625 Alarm seconds	RO	unsigned char	0 - 59	Seconds	
		Alarm 4	626 Alarm code	RO	unsigned char	1 - 127 F alarms, 129 - 255 W alarms		0x02 => 2F (MSb = 0), 0x82 => 2W (MSb = 1)
			627 Alarm year	RO	unsigned short	2016 - 2250	Year	
			628 Alarm month-day	RO	unsigned short	01.01 - 12.31	Month and day	0x020C => Feb12
			629 Alarm time	RO	unsigned short	0:00 - 23:59	Hours and minutes	0x0805 => 8:05
		Alarm 5	630 Alarm seconds	RO	unsigned char	0 - 59	Seconds	
			631 Alarm code	RO	unsigned char	1 - 127 F alarms, 129 - 255 W alarms		0x02 => 2F (MSb = 0), 0x82 => 2W (MSb = 1)
			632 Alarm year	RO	unsigned short	2016 - 2250	Year	
			633 Alarm month-day	RO	unsigned short	01.01 - 12.31	Month and day	0x020C => Feb12
		Alarm 6	634 Alarm time	RO	unsigned short	0:00 - 23:59	Hours and minutes	0x0805 => 8:05
			635 Alarm seconds	RO	unsigned char	0 - 59	Seconds	
			636 Alarm code	RO	unsigned char	1 - 127 F alarms, 129 - 255 W alarms		0x02 => 2F (MSb = 0), 0x82 => 2W (MSb = 1)
			637 Alarm year	RO	unsigned short	2016 - 2250	Year	
		Alarm 7	638 Alarm month-day	RO	unsigned short	01.01 - 12.31	Month and day	0x020C => Feb12
			639 Alarm time	RO	unsigned short	0:00 - 23:59	Hours and minutes	0x0805 => 8:05
			640 Alarm seconds	RO	unsigned char	0 - 59	Seconds	
			641 Alarm code	RO	unsigned char	1 - 127 F alarms, 129 - 255 W alarms		0x02 => 2F (MSb = 0), 0x82 => 2W (MSb = 1)
		Alarm 8	642 Alarm year	RO	unsigned short	2016 - 2250	Year	
			643 Alarm month-day	RO	unsigned short	01.01 - 12.31	Month and day	0x020C => Feb12
			644 Alarm time	RO	unsigned short	0:00 - 23:59	Hours and minutes	0x0805 => 8:05
			645 Alarm seconds	RO	unsigned char	0 - 59	Seconds	
		Alarm 9	646 Alarm code	RO	unsigned char	1 - 127 F alarms, 129 - 255 W alarms		0x02 => 2F (MSb = 0), 0x82 => 2W (MSb = 1)
			647 Alarm year	RO	unsigned short	2016 - 2250	Year	
			648 Alarm month-day	RO	unsigned short	01.01 - 12.31	Month and day	0x020C => Feb12
			649 Alarm time	RO	unsigned short	0:00 - 23:59	Hours and minutes	0x0805 => 8:05
		Alarm 10	650 Alarm seconds	RO	unsigned char	0 - 59	Seconds	
			651 Alarm code	RO	unsigned char	1 - 127 F alarms, 129 - 255 W alarms		0x02 => 2F (MSb = 0), 0x82 => 2W (MSb = 1)
			652 Alarm year	RO	unsigned short	2016 - 2250	Year	
			653 Alarm month-day	RO	unsigned short	01.01 - 12.31	Month and day	0x020C => Feb12
		Alarm 11	654 Alarm time	RO	unsigned short	0:00 - 23:59	Hours and minutes	0x0805 => 8:05
			655 Alarm seconds	RO	unsigned char	0 - 59	Seconds	
			656 Alarm code	RO	unsigned char	1 - 127 F alarms, 129 - 255 W alarms		0x02 => 2F (MSb = 0), 0x82 => 2W (MSb = 1)

Group	Subgroups	Register number	Register name	Data			Values and Units	Examples and comments
				Access	Type	Range		
Alarms	Alarms history	Alarm 10	657 Alarm year	RO	unsigned short	2016 - 2250	Year	
			658 Alarm month-day	RO	unsigned short	01.01 - 12.31	Month and day	0x020C => Feb12
			659 Alarm time	RO	unsigned short	0:00 - 23:59	Hours and minutes	0x0805 => 8:05
			660 Alarm seconds	RO	unsigned char	0 - 59	Seconds	
			661 Alarm code	RO	unsigned char	1 - 127 F alarms, 129 - 255 W alarms		0x02 => 2F (MSb = 0), 0x82 => 2W (MSb = 1)
		Alarm 11	662 Alarm year	RO	unsigned short	2016 - 2250	Year	
			663 Alarm month-day	RO	unsigned short	01.01 - 12.31	Month and day	0x020C => Feb12
			664 Alarm time	RO	unsigned short	0:00 - 23:59	Hours and minutes	0x0805 => 8:05
			665 Alarm seconds	RO	unsigned char	0 - 59	Seconds	
			666 Alarm code	RO	unsigned char	1 - 127 F alarms, 129 - 255 W alarms		0x02 => 2F (MSb = 0), 0x82 => 2W (MSb = 1)
		Alarm 12	667 Alarm year	RO	unsigned short	2016 - 2250	Year	
			668 Alarm month-day	RO	unsigned short	01.01 - 12.31	Month and day	0x020C => Feb12
			669 Alarm time	RO	unsigned short	0:00 - 23:59	Hours and minutes	0x0805 => 8:05
			670 Alarm seconds	RO	unsigned char	0 - 59	Seconds	
			671 Alarm code	RO	unsigned char	1 - 127 F alarms, 129 - 255 W alarms		0x02 => 2F (MSb = 0), 0x82 => 2W (MSb = 1)
		Alarm 13	672 Alarm year	RO	unsigned short	2016 - 2250	Year	
			673 Alarm month-day	RO	unsigned short	01.01 - 12.31	Month and day	0x020C => Feb12
			674 Alarm time	RO	unsigned short	0:00 - 23:59	Hours and minutes	0x0805 => 8:05
			675 Alarm seconds	RO	unsigned char	0 - 59	Seconds	
			676 Alarm code	RO	unsigned char	1 - 127 F alarms, 129 - 255 W alarms		0x02 => 2F (MSb = 0), 0x82 => 2W (MSb = 1)
		Alarm 14	677 Alarm year	RO	unsigned short	2016 - 2250	Year	
			678 Alarm month-day	RO	unsigned short	01.01 - 12.31	Month and day	0x020C => Feb12
			679 Alarm time	RO	unsigned short	0:00 - 23:59	Hours and minutes	0x0805 => 8:05
			680 Alarm seconds	RO	unsigned char	0 - 59	Seconds	
			681 Alarm code	RO	unsigned char	1 - 127 F alarms, 129 - 255 W alarms		0x02 => 2F (MSb = 0), 0x82 => 2W (MSb = 1)
		Alarm 15	682 Alarm year	RO	unsigned short	2016 - 2250	Year	
			683 Alarm month-day	RO	unsigned short	01.01 - 12.31	Month and day	0x020C => Feb12
			684 Alarm time	RO	unsigned short	0:00 - 23:59	Hours and minutes	0x0805 => 8:05
			685 Alarm seconds	RO	unsigned char	0 - 59	Seconds	
			686 Alarm code	RO	unsigned char	1 - 127 F alarms, 129 - 255 W alarms		0x02 => 2F (MSb = 0), 0x82 => 2W (MSb = 1)
		Alarm 16	687 Alarm year	RO	unsigned short	2016 - 2250	Year	
			688 Alarm month-day	RO	unsigned short	01.01 - 12.31	Month and day	0x020C => Feb12
			689 Alarm time	RO	unsigned short	0:00 - 23:59	Hours and minutes	0x0805 => 8:05
			690 Alarm seconds	RO	unsigned char	0 - 59	Seconds	
			691 Alarm code	RO	unsigned char	1 - 127 F alarms, 129 - 255 W alarms		0x02 => 2F (MSb = 0), 0x82 => 2W (MSb = 1)

Group	Subgroups	Register number	Register name	Data			Values and Units	Examples and comments
				Access	Type	Range		
Alarms	Alarms history	Alarm 17	692 Alarm year	RO	unsigned short	2016 - 2250	Year	
			693 Alarm month-day	RO	unsigned short	01.01 - 12.31	Month and day	0x020C => Feb12
			694 Alarm time	RO	unsigned short	0:00 - 23:59	Hours and minutes	0x0805 => 8:05
			695 Alarm seconds	RO	unsigned char	0 - 59	Seconds	
		Alarm 18	696 Alarm code	RO	unsigned char	1 - 127 F alarms, 129 - 255 W alarms		0x02 => 2F (MSb = 0), 0x82 => 2W (MSb = 1)
			697 Alarm year	RO	unsigned short	2016 - 2250	Year	
			698 Alarm month-day	RO	unsigned short	01.01 - 12.31	Month and day	0x020C => Feb12
			699 Alarm time	RO	unsigned short	0:00 - 23:59	Hours and minutes	0x0805 => 8:05
		Alarm 19	700 Alarm seconds	RO	unsigned char	0 - 59	Seconds	
			701 Alarm code	RO	unsigned char	1 - 127 F alarms, 129 - 255 W alarms		0x02 => 2F (MSb = 0), 0x82 => 2W (MSb = 1)
			702 Alarm year	RO	unsigned short	2016 - 2250	Year	
			703 Alarm month-day	RO	unsigned short	01.01 - 12.31	Month and day	0x020C => Feb12
		Alarm 20	704 Alarm time	RO	unsigned short	0:00 - 23:59	Hours and minutes	0x0805 => 8:05
			705 Alarm seconds	RO	unsigned char	0 - 59	Seconds	
			706 Alarm code	RO	unsigned char	1 - 127 F alarms, 129 - 255 W alarms		0x02 => 2F (MSb = 0), 0x82 => 2W (MSb = 1)
		Alarm 21	707 Alarm year	RO	unsigned short	2016 - 2250	Year	
			708 Alarm month-day	RO	unsigned short	01.01 - 12.31	Month and day	0x020C => Feb12
			709 Alarm time	RO	unsigned short	0:00 - 23:59	Hours and minutes	0x0805 => 8:05
			710 Alarm seconds	RO	unsigned char	0 - 59	Seconds	
		Alarm 22	711 Alarm code	RO	unsigned char	1 - 127 F alarms, 129 - 255 W alarms		0x02 => 2F (MSb = 0), 0x82 => 2W (MSb = 1)
			712 Alarm year	RO	unsigned short	2016 - 2250	Year	
			713 Alarm month-day	RO	unsigned short	01.01 - 12.31	Month and day	0x020C => Feb12
			714 Alarm time	RO	unsigned short	0:00 - 23:59	Hours and minutes	0x0805 => 8:05
		Alarm 23	715 Alarm seconds	RO	unsigned char	0 - 59	Seconds	
			716 Alarm code	RO	unsigned char	1 - 127 F alarms, 129 - 255 W alarms		0x02 => 2F (MSb = 0), 0x82 => 2W (MSb = 1)
			717 Alarm year	RO	unsigned short	2016 - 2250	Year	
			718 Alarm month-day	RO	unsigned short	01.01 - 12.31	Month and day	0x020C => Feb12
		Alarm 24	719 Alarm time	RO	unsigned short	0:00 - 23:59	Hours and minutes	0x0805 => 8:05
			720 Alarm seconds	RO	unsigned char	0 - 59	Seconds	
			721 Alarm code	RO	unsigned char	1 - 127 F alarms, 129 - 255 W alarms		0x02 => 2F (MSb = 0), 0x82 => 2W (MSb = 1)
			722 Alarm year	RO	unsigned short	2016 - 2250	Year	
		Alarm 25	723 Alarm month-day	RO	unsigned short	01.01 - 12.31	Month and day	0x020C => Feb12
			724 Alarm time	RO	unsigned short	0:00 - 23:59	Hours and minutes	0x0805 => 8:05
			725 Alarm seconds	RO	unsigned char	0 - 59	Seconds	
			726 Alarm code	RO	unsigned char	1 - 127 F alarms, 129 - 255 W alarms		0x02 => 2F (MSb = 0), 0x82 => 2W (MSb = 1)

Group	Subgroups	Register number	Register name	Data			Values and Units	Examples and comments
				Access	Type	Range		
Alarms	Alarms history	Alarm 24	727 Alarm year	RO	unsigned short	2016 - 2250	Year	
			728 Alarm month-day	RO	unsigned short	01.01 - 12.31	Month and day	0x020C => Feb12
			729 Alarm time	RO	unsigned short	0:00 - 23:59	Hours and minutes	0x0805 => 8:05
			730 Alarm seconds	RO	unsigned char	0 - 59	Seconds	
		Alarm 25	731 Alarm code	RO	unsigned char	1 - 127 F alarms, 129 - 255 W alarms		0x02 => 2F (MSb = 0), 0x82 => 2W (MSb = 1)
			732 Alarm year	RO	unsigned short	2016 - 2250	Year	
			733 Alarm month-day	RO	unsigned short	01.01 - 12.31	Month and day	0x020C => Feb12
			734 Alarm time	RO	unsigned short	0:00 - 23:59	Hours and minutes	0x0805 => 8:05
			735 Alarm seconds	RO	unsigned char	0 - 59	Seconds	
		Alarm 26	736 Alarm code	RO	unsigned char	1 - 127 F alarms, 129 - 255 W alarms		0x02 => 2F (MSb = 0), 0x82 => 2W (MSb = 1)
			737 Alarm year	RO	unsigned short	2016 - 2250	Year	
			738 Alarm month-day	RO	unsigned short	01.01 - 12.31	Month and day	0x020C => Feb12
			739 Alarm time	RO	unsigned short	0:00 - 23:59	Hours and minutes	0x0805 => 8:05
			740 Alarm seconds	RO	unsigned char	0 - 59	Seconds	
		Alarm 27	741 Alarm code	RO	unsigned char	1 - 127 F alarms, 129 - 255 W alarms		0x02 => 2F (MSb = 0), 0x82 => 2W (MSb = 1)
			742 Alarm year	RO	unsigned short	2016 - 2250	Year	
			743 Alarm month-day	RO	unsigned short	01.01 - 12.31	Month and day	0x020C => Feb12
			744 Alarm time	RO	unsigned short	0:00 - 23:59	Hours and minutes	0x0805 => 8:05
			745 Alarm seconds	RO	unsigned char	0 - 59	Seconds	
		Alarm 28	746 Alarm code	RO	unsigned char	1 - 127 F alarms, 129 - 255 W alarms		0x02 => 2F (MSb = 0), 0x82 => 2W (MSb = 1)
			747 Alarm year	RO	unsigned short	2016 - 2250	Year	
			748 Alarm month-day	RO	unsigned short	01.01 - 12.31	Month and day	0x020C => Feb12
			749 Alarm time	RO	unsigned short	0:00 - 23:59	Hours and minutes	0x0805 => 8:05
			750 Alarm seconds	RO	unsigned char	0 - 59	Seconds	
		Alarm 29	751 Alarm code	RO	unsigned char	1 - 127 F alarms, 129 - 255 W alarms		0x02 => 2F (MSb = 0), 0x82 => 2W (MSb = 1)
			752 Alarm year	RO	unsigned short	2016 - 2250	Year	
			753 Alarm month-day	RO	unsigned short	01.01 - 12.31	Month and day	0x020C => Feb12
			754 Alarm time	RO	unsigned short	0:00 - 23:59	Hours and minutes	0x0805 => 8:05
			755 Alarm seconds	RO	unsigned char	0 - 59	Seconds	
		Alarm 30	756 Alarm code	RO	unsigned char	1 - 127 F alarms, 129 - 255 W alarms		0x02 => 2F (MSb = 0), 0x82 => 2W (MSb = 1)
			757 Alarm year	RO	unsigned short	2016 - 2250	Year	
			758 Alarm month-day	RO	unsigned short	01.01 - 12.31	Month and day	0x020C => Feb12
			759 Alarm time	RO	unsigned short	0:00 - 23:59	Hours and minutes	0x0805 => 8:05
			760 Alarm seconds	RO	unsigned char	0 - 59	Seconds	
		Alarm 31	761 Alarm code	RO	unsigned char	1 - 127 F alarms, 129 - 255 W alarms		0x02 => 2F (MSb = 0), 0x82 => 2W (MSb = 1)
			762 Alarm year	RO	unsigned short	2016 - 2250	Year	
			763 Alarm month-day	RO	unsigned short	01.01 - 12.31	Month and day	0x020C => Feb12
			764 Alarm time	RO	unsigned short	0:00 - 23:59	Hours and minutes	0x0805 => 8:05

Group	Subgroups	Register number	Register name	Data			Values and Units	Examples and comments
				Access	Type	Range		
Alarms	Alarms history	Alarm 31	762 Alarm year	RO	unsigned short	2016 - 2250	Year	
			763 Alarm month-day	RO	unsigned short	01.01 - 12.31	Month and day	0x020C => Feb12
			764 Alarm time	RO	unsigned short	0:00 - 23:59	Hours and minutes	0x0805 => 8:05
			765 Alarm seconds	RO	unsigned char	0 - 59	Seconds	
		766 Alarm code	RO	unsigned char	1 - 127 F alarms, 129 - 255 W alarms			0x02 => 2F (MSb = 0), 0x82 => 2W (MSb = 1)
		Alarm 32	767 Alarm year	RO	unsigned short	2016 - 2250	Year	
			768 Alarm month-day	RO	unsigned short	01.01 - 12.31	Month and day	0x020C => Feb12
			769 Alarm time	RO	unsigned short	0:00 - 23:59	Hours and minutes	0x0805 => 8:05
			770 Alarm seconds	RO	unsigned char	0 - 59	Seconds	
		771 Alarm code	RO	unsigned char	1 - 127 F alarms, 129 - 255 W alarms			0x02 => 2F (MSb = 0), 0x82 => 2W (MSb = 1)
		Alarm 33	772 Alarm year	RO	unsigned short	2016 - 2250	Year	
			773 Alarm month-day	RO	unsigned short	01.01 - 12.31	Month and day	0x020C => Feb12
			774 Alarm time	RO	unsigned short	0:00 - 23:59	Hours and minutes	0x0805 => 8:05
			775 Alarm seconds	RO	unsigned char	0 - 59	Seconds	
		776 Alarm code	RO	unsigned char	1 - 127 F alarms, 129 - 255 W alarms			0x02 => 2F (MSb = 0), 0x82 => 2W (MSb = 1)
		Alarm 34	777 Alarm year	RO	unsigned short	2016 - 2250	Year	
			778 Alarm month-day	RO	unsigned short	01.01 - 12.31	Month and day	0x020C => Feb12
			779 Alarm time	RO	unsigned short	0:00 - 23:59	Hours and minutes	0x0805 => 8:05
			780 Alarm seconds	RO	unsigned char	0 - 59	Seconds	
		781 Alarm code	RO	unsigned char	1 - 127 F alarms, 129 - 255 W alarms			0x02 => 2F (MSb = 0), 0x82 => 2W (MSb = 1)
		Alarm 35	782 Alarm year	RO	unsigned short	2016 - 2250	Year	
			783 Alarm month-day	RO	unsigned short	01.01 - 12.31	Month and day	0x020C => Feb12
			784 Alarm time	RO	unsigned short	0:00 - 23:59	Hours and minutes	0x0805 => 8:05
			785 Alarm seconds	RO	unsigned char	0 - 59	Seconds	
		786 Alarm code	RO	unsigned char	1 - 127 F alarms, 129 - 255 W alarms			0x02 => 2F (MSb = 0), 0x82 => 2W (MSb = 1)
		Alarm 36	787 Alarm year	RO	unsigned short	2016 - 2250	Year	
			788 Alarm month-day	RO	unsigned short	01.01 - 12.31	Month and day	0x020C => Feb12
			789 Alarm time	RO	unsigned short	0:00 - 23:59	Hours and minutes	0x0805 => 8:05
			790 Alarm seconds	RO	unsigned char	0 - 59	Seconds	
		791 Alarm code	RO	unsigned char	1 - 127 F alarms, 129 - 255 W alarms			0x02 => 2F (MSb = 0), 0x82 => 2W (MSb = 1)
		Alarm 37	792 Alarm year	RO	unsigned short	2016 - 2250	Year	
			793 Alarm month-day	RO	unsigned short	01.01 - 12.31	Month and day	0x020C => Feb12
			794 Alarm time	RO	unsigned short	0:00 - 23:59	Hours and minutes	0x0805 => 8:05
			795 Alarm seconds	RO	unsigned char	0 - 59	Seconds	
		796 Alarm code	RO	unsigned char	1 - 127 F alarms, 129 - 255 W alarms			0x02 => 2F (MSb = 0), 0x82 => 2W (MSb = 1)

Group	Subgroups	Register number	Register name	Data			Values and Units	Examples and comments
				Access	Type	Range		
Alarms	Alarms history	Alarm 38	797 Alarm year	RO	unsigned short	2016 - 2250	Year	
			798 Alarm month-day	RO	unsigned short	01.01 - 12.31	Month and day	0x020C => Feb12
			799 Alarm time	RO	unsigned short	0:00 - 23:59	Hours and minutes	0x0805 => 8:05
			800 Alarm seconds	RO	unsigned char	0 - 59	Seconds	
			801 Alarm code	RO	unsigned char	1 - 127 F alarms, 129 - 255 W alarms		0x02 => 2F (MSb = 0), 0x82 => 2W (MSb = 1)
		Alarm 39	802 Alarm year	RO	unsigned short	2016 - 2250	Year	
			803 Alarm month-day	RO	unsigned short	01.01 - 12.31	Month and day	0x020C => Feb12
			804 Alarm time	RO	unsigned short	0:00 - 23:59	Hours and minutes	0x0805 => 8:05
			805 Alarm seconds	RO	unsigned char	0 - 59	Seconds	
			806 Alarm code	RO	unsigned char	1 - 127 F alarms, 129 - 255 W alarms		0x02 => 2F (MSb = 0), 0x82 => 2W (MSb = 1)
		Alarm 40	807 Alarm year	RO	unsigned short	2016 - 2250	Year	
			808 Alarm month-day	RO	unsigned short	01.01 - 12.31	Month and day	0x020C => Feb12
			809 Alarm time	RO	unsigned short	0:00 - 23:59	Hours and minutes	0x0805 => 8:05
			810 Alarm seconds	RO	unsigned char	0 - 59	Seconds	
			811 Alarm code	RO	unsigned char	1 - 127 F alarms, 129 - 255 W alarms		0x02 => 2F (MSb = 0), 0x82 => 2W (MSb = 1)
		Alarm 41	812 Alarm year	RO	unsigned short	2016 - 2250	Year	
			813 Alarm month-day	RO	unsigned short	01.01 - 12.31	Month and day	0x020C => Feb12
			814 Alarm time	RO	unsigned short	0:00 - 23:59	Hours and minutes	0x0805 => 8:05
			815 Alarm seconds	RO	unsigned char	0 - 59	Seconds	
			816 Alarm code	RO	unsigned char	1 - 127 F alarms, 129 - 255 W alarms		0x02 => 2F (MSb = 0), 0x82 => 2W (MSb = 1)
		Alarm 42	817 Alarm year	RO	unsigned short	2016 - 2250	Year	
			818 Alarm month-day	RO	unsigned short	01.01 - 12.31	Month and day	0x020C => Feb12
			819 Alarm time	RO	unsigned short	0:00 - 23:59	Hours and minutes	0x0805 => 8:05
			820 Alarm seconds	RO	unsigned char	0 - 59	Seconds	
			821 Alarm code	RO	unsigned char	1 - 127 F alarms, 129 - 255 W alarms		0x02 => 2F (MSb = 0), 0x82 => 2W (MSb = 1)
		Alarm 43	822 Alarm year	RO	unsigned short	2016 - 2250	Year	
			823 Alarm month-day	RO	unsigned short	01.01 - 12.31	Month and day	0x020C => Feb12
			824 Alarm time	RO	unsigned short	0:00 - 23:59	Hours and minutes	0x0805 => 8:05
			825 Alarm seconds	RO	unsigned char	0 - 59	Seconds	
			826 Alarm code	RO	unsigned char	1 - 127 F alarms, 129 - 255 W alarms		0x02 => 2F (MSb = 0), 0x82 => 2W (MSb = 1)
		Alarm 44	827 Alarm year	RO	unsigned short	2016 - 2250	Year	
			828 Alarm month-day	RO	unsigned short	01.01 - 12.31	Month and day	0x020C => Feb12
			829 Alarm time	RO	unsigned short	0:00 - 23:59	Hours and minutes	0x0805 => 8:05
			830 Alarm seconds	RO	unsigned char	0 - 59	Seconds	
			831 Alarm code	RO	unsigned char	1 - 127 F alarms, 129 - 255 W alarms		0x02 => 2F (MSb = 0), 0x82 => 2W (MSb = 1)

Group	Subgroups	Register number	Register name	Data			Values and Units	Examples and comments
				Access	Type	Range		
Alarms	Alarms history	Alarm 45	832 Alarm year	RO	unsigned short	2016 - 2250	Year	
			833 Alarm month-day	RO	unsigned short	01.01 - 12.31	Month and day	0x020C => Feb12
			834 Alarm time	RO	unsigned short	0:00 - 23:59	Hours and minutes	0x0805 => 8:05
			835 Alarm seconds	RO	unsigned char	0 - 59	Seconds	
		Alarm 46	836 Alarm code	RO	unsigned char	1 - 127 F alarms, 129 - 255 W alarms		0x02 => 2F (MSb = 0), 0x82 => 2W (MSb = 1)
			837 Alarm year	RO	unsigned short	2016 - 2250	Year	
			838 Alarm month-day	RO	unsigned short	01.01 - 12.31	Month and day	0x020C => Feb12
			839 Alarm time	RO	unsigned short	0:00 - 23:59	Hours and minutes	0x0805 => 8:05
			840 Alarm seconds	RO	unsigned char	0 - 59	Seconds	
		Alarm 47	841 Alarm code	RO	unsigned char	1 - 127 F alarms, 129 - 255 W alarms		0x02 => 2F (MSb = 0), 0x82 => 2W (MSb = 1)
			842 Alarm year	RO	unsigned short	2016 - 2250	Year	
			843 Alarm month-day	RO	unsigned short	01.01 - 12.31	Month and day	0x020C => Feb12
			844 Alarm time	RO	unsigned short	0:00 - 23:59	Hours and minutes	0x0805 => 8:05
			845 Alarm seconds	RO	unsigned char	0 - 59	Seconds	
		Alarm 48	846 Alarm code	RO	unsigned char	1 - 127 F alarms, 129 - 255 W alarms		0x02 => 2F (MSb = 0), 0x82 => 2W (MSb = 1)
			847 Alarm year	RO	unsigned short	2016 - 2250	Year	
			848 Alarm month-day	RO	unsigned short	01.01 - 12.31	Month and day	0x020C => Feb12
			849 Alarm time	RO	unsigned short	0:00 - 23:59	Hours and minutes	0x0805 => 8:05
			850 Alarm seconds	RO	unsigned char	0 - 59	Seconds	
		Alarm 49	851 Alarm code	RO	unsigned char	1 - 127 F alarms, 129 - 255 W alarms		0x02 => 2F (MSb = 0), 0x82 => 2W (MSb = 1)
			852 Alarm year	RO	unsigned short	2016 - 2250	Year	
			853 Alarm month-day	RO	unsigned short	01.01 - 12.31	Month and day	0x020C => Feb12
			854 Alarm time	RO	unsigned short	0:00 - 23:59	Hours and minutes	0x0805 => 8:05
			855 Alarm seconds	RO	unsigned char	0 - 59	Seconds	
		Alarm 50	856 Alarm code	RO	unsigned char	1 - 127 F alarms, 129 - 255 W alarms		0x02 => 2F (MSb = 0), 0x82 => 2W (MSb = 1)
			857 Alarm year	RO	unsigned short	2016 - 2250	Year	
			858 Alarm month-day	RO	unsigned short	01.01 - 12.31	Month and day	0x020C => Feb12
			859 Alarm time	RO	unsigned short	0:00 - 23:59	Hours and minutes	0x0805 => 8:05
			860 Alarm seconds	RO	unsigned char	0 - 59	Seconds	
		Alarm 50	861 Alarm code	RO	unsigned char	1 - 127 F alarms, 129 - 255 W alarms		0x02 => 2F (MSb = 0), 0x82 => 2W (MSb = 1)
			862 Alarm year	RO	unsigned short	2016 - 2250	Year	
			863 Alarm month-day	RO	unsigned short	01.01 - 12.31	Month and day	0x020C => Feb12
			864 Alarm time	RO	unsigned short	0:00 - 23:59	Hours and minutes	0x0805 => 8:05
			865 Alarm seconds	RO	unsigned char	0 - 59	Seconds	
Monitoring	Detailed information	900	Status icon bit mask	RO	unsigned short	0 - 8191	Starting => 0 bit, Stopping => 1 bit, Fan => 2 bit, Rotor => 3 bit, Heating => 4 bit, Cooling => 5 bit, HeatingDenied => 6 bit, CoolingDenied => 7 bit, FlowDown => 8 bit, FreeHeating => 9 bit, FreeCooling => 10 bit, AlarmF => 11 bit, AlarmW => 12 bit	

Group	Subgroups	Register number	Register name	Data			Values and Units	Examples and comments
				Access	Type	Range		
Monitoring	Detailed information	901	Heating/cooling config	RO	unsigned char	0 - 7	Electric heater => 0 bit, Water cooler/heater => 1 bit, DX unit => 2 bit	
		902	Supply temperature	RO	signed short	-500 - 1200	x10 C	30000=>B1 sensor not used
		903	Extract Temperature	RO	signed short	-500 - 1200	x10 C	
		904	Outdoor temp	RO	signed short	-500 - 1200	x10 C	
		905	Water temperature	RO	signed short	-500 - 1200	x10 C	
		906-907	Current supply flow	RO	unsigned int	0 - 200000	m3/h, l/s	
		908-909	Current extract flow	RO	unsigned int	0 - 200000	m3/h, l/s	
		910	Current supply fan intensity	RO	unsigned short	0 - 1000	x10 %	
		911	Current extract fan intensity	RO	unsigned short	0 - 1000	x10 %	
		912	Heat exchanger	RO	unsigned short	0 - 1000	x10 %	
		913	Electric heater	RO	unsigned short	0 - 1000	x10 %	
		914	Water heater	RO	unsigned short	0 - 1000	x10 %	
		915	Water cooler	RO	unsigned short	0 - 1000	x10 %	
		916	DX unit	RO	signed short	-1000 - +1000	x10 %	
		917	Filters Impurity	RO	unsigned char	0 - 100	%	
		918	Air dampers	RO	unsigned char	0 - 100	%	
		952	Air quality or humidity (sensor 1 - B8)	RO	unsigned short	0 - 65535	ppm,%	
		956	Indoor humidity	RO	unsigned short	AH: -2 - 10000	sensor fail - 2, sensor not found - 1, AHU is off - 0, value 1 - 10000 x100 g/m3	561 = > 5.61 g/m3
		957	Outdoor humidity	RO	unsigned short	AH: -2 - 10000	sensor fail - 2, sensor not found - 1, AHU is off - 0, value 1 - 10000 x100 g/m3	1305 = > 13.05 g/m3
	Operation counters	927-928	Supply fan, Day	RO	unsigned int	0 - 4294967296	h	
		929-930	Supply fan, Month	RO	unsigned int	0 - 4294967296	h	
		931-932	Supply fan, Total	RO	unsigned int	0 - 4294967296	h	
		933-934	Exhaust fan, Day	RO	unsigned int	0 - 4294967296	h	
		935-936	Exhaust fan, Month	RO	unsigned int	0 - 4294967296	h	
		937-938	Exhaust fan, Total	RO	unsigned int	0 - 4294967296	h	
		939-940	Electric heater, Day	RO	unsigned int	0 - 4294967296	h	
		941-942	Electric heater, Month	RO	unsigned int	0 - 4294967296	h	
		943-944	Electric heater, Total	RO	unsigned int	0 - 4294967296	h	
		961-962	Heat exchanger, Day	RO	unsigned int	0 - 4294967296	h	
	Panel	963-964	Heat exchanger, Month	RO	unsigned int	0 - 4294967296	h	
		965-966	Heat exchanger, Total	RO	unsigned int	0 - 4294967296	h	
		946	Panel 1 temperature	RO	signed short	-500 - 1200, -32768 - panel not connected	x10 C	
		947	Panel 1 humidity	RO	signed char	0 - 100, -100 - panel not connected	%	
		948	Panel 1 air quality	RO	unsigned short	0 - 65535	ppm, ppb	
		949	Panel 2 temperature	RO	signed short	-500 - 1200, -32768 - panel not connected	x10 C	
		950	Panel 2 humidity	RO	signed char	0 - 100, -100 - panel not connected	%	
		951	Panel 2 air quality	RO	unsigned short	0 - 65535	ppm, ppb	
		954	Connected panels	RO	unsigned char	0 - 3	None = 0, Panel(1) = 1, Panel(2) = 2, Panel(1) and Panel(2) = 3	

Group	Subgroups	Register number	Register name	Data			Values and Units	Examples and comments
				Access	Type	Range		
Others	DOUT	959	Heating	RO	unsigned char	0 - 1	Off = 0, On = 1	
		960	Cooling	RO	unsigned char	0 - 1	Off = 0, On = 1	
		1000-1001	Firmware version	RO	unsigned int	1 - 4294967295	"1st number 4bit <<28, 2nd number 4bit <<24, 3rd number 4bit <<20, 4th number 8bit <<12, 5th number 12bit<<0"	18886660 => 2.1.2.3.4
		1002-1003	Panel 1 firmware version	RO	unsigned int	1 - 4294967295	1st number 8bit <<24, 2nd number 4bit <<20, 3rd number 8bit <<12, 4th number 12bit<<0	18886660 => 1.2.3.4
		1004-1005	Panel 2 firmware version	RO	unsigned int	1 - 4294967295	1st number 8bit <<24, 2nd number 4bit <<20, 3rd number 8bit <<12, 4th number 12bit<<0	18886660 => 1.2.3.4
		1050	Reset settings	R/W	unsigned short	0 - 11	Reset Away settings = 1, Reset Normal settings = 2, Reset Intensive settings = 3, Reset Boost settings = 4, Reset Holidays settings = 5, Reset Override settings = 6, Reset Kitchen settings = 7, Reset Fireplace settings = 8, Reset Air quality settings = 9, Reset Eco settings = 10, Reset Advanced settings = 11	
		1051	Clean filters calibration	R/W	unsigned char	1	Confirm = 1	Resets filters counter, if filter clogging is more than 1%

Alarm codes (registers 600-861)

Code		Text	Message
Hex	Dec		
03	3	F3	Water Temp B5 To Low
04	4	F4	Low Supply Air Temperature
05	5	F5	High Supply Air Temperature
06	6	F6	Electric Heater Overheat
07	7	F7	Heat Exchanger Failure
08	8	F8	Heat Exchanger Icing
09	9	F9	Internal Fire
0A	10	F10	External Fire
0B	11	F11	Supply Air Temp B1 Short
0C	12	F12	Supply Air Temp B1 Not Connected
0D	13	F13	Extract Air Temp B2 Short
0E	14	F14	Extract Air Temp B2 Not Connected
0F	15	F15	Outdoor Air Temp B3 Short
10	16	F16	Outdoor Air Temp B3 Not Connected
13	19	F19	Water Temp B5 Short
14	20	F20	Water Temp B5 Not Connected
15	21	F21	Supply Temp After Hx B10 (B14) Short

Code		Text	Message
Hex	Dec		
16	22	F22	Supply Temp After Hx B10 (B14) Not Connected
17	23	F23	Flash Fail
18	24	F24	Too Low 24V Supply Voltage
19	25	F25	Too High 24V Supply Voltage
1A	26	F26	24V Supply Voltage Overloaded
1C	28	F28	Room Temperature Sensor Fail
1D	29	F29	Room Humidity Sensor Fail
1E	30	F30	Humidity sensor failure
1F	31	F31	Impurity sensor failure
28	40	F40	Communication error
29	41	F41	Fire dampers failure
2A	42	F42	Fire damper failure
2B	43	F43	Fire damper failure
2C	44	F44	Fire damper failure
2D	45	F45	Fire damper failure
2E	46	F46	External fire alarm
2F	47	F47	External fire alarm
30	48	F48	External fire alarm
31	49	F49	External fire alarm
32	50	F50	External fire alarm
33	51	F51	Electric heater failure
81	129	W1	Change Air Filter
82	130	W2	Service Mode
83	131	W3	Water Temp B5 To Low (Warning)
84	132	W4	Humidity sensor failure
85	133	W5	Impurity sensor failure
86	134	W6	Low heat exchanger efficiency

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