[[EMS]]

telegrams

counting

All offsets are 1 based. In general, then:

Byte 1	**Byte 2**	**Byte 3**	**Byte 4**	**Byte 5 ... n-2**	**Byte n-1**	**Byte n**	**Byte n + 1**
transmitter	receiver	Telegram type	offset	data bytes	CRC	0x00	Length n

The 0x00 is the BREAK, the length is added by the EMS GW.

The data offset in the telegrams at position 4 is 0-based. This offset is the telegram offset from the tables minus five.

The first data byte at position 5 has the data offset 0. If, for example, an offset of 2 is specified in the telegram, then it is byte 7 from the telegram and is thus listed in the tables. For the following telegram, the hour.

An example from Thursday 29.01.2015 8:29:29

Data (hex)	**10**	**00**	**06**	**00**	**0f**	**01**	**08**	**1d**	**1d**	**1d**	**03**	**00**	**45**
Data Offset (Dec)	-4	-3	-2	-1	0	1	2	3	4	5	6	7	8th
Telegram offset (Dec)	1	2	3	4	5	6	7	8th	9	10	11	12	13

This telegram can be requested at the EMS gateway by the following command line:

0b 90 06 00 08 <crc>

So from address 0x0b (EMS gateway) to 0x10 (RC35, RC300, ...) telegram 0x06 from offset 0x00, 0x06 data bytes are to be interrogated. Since the highest bit was set at the receiver, it is a query that is answered immediately after sending (next polling). The CRC is calculated by the EMS gateway at the setting "Kt 1" and appended at the back

table structure

source	**aim**	**Type**	**begin**	**bit**	**bytes**	**divisor**	**line**	**unit**	**comment**
Hex	**Hex**	**Hex**	**December**	**December**	**December**	**December**			
08	00	34	6		2	10	analogous	° C	Hot water temperature is
08	00	34	10	0			digital		daytime

Start is the starting position. In this case with hot water "6"

Bit is the position of the bit in the value. The first bit is then bit 0.

Bytes is the number of bytes that belong together. The "2" in this example means that bytes 6 and 7 belong together. The first byte is the high byte. So byte "6" 256 + byte "7". ⇒ 0 * 256 + 202 = 202

Divisor is required to calculate the reading. In this case "10", ie 202/10 = 20.2

Line is the representation of the curve. With analog , the measuring points are simply connected directly to each other. In the digital line , the old value is retained and a horizontal line is drawn until a new value arrives. Then the line is drawn vertically up or down to the new value. So the line looks like a staircase.

Remark contains further information. For example, which value has which meaning. For status bits, the bit is set (= 1) unless otherwise specified.

Overview

In the following table, the length denotes the number of data bytes. The telegram length is +4 bytes. The telegrams on the bus can be shorter.

source	aim	Type	Surname	length	comment
RC35		0x01		28	
All		0x02	version Message	8th	version
MC10		0x04		15	
MC10		0x05			(RC35 → UBA with ACK) when resetting maintenance messages
RC35		0x06	RCTimeMessage	8th	
MC10		0x07		13	
MC10		0x10	UBAErrorMessages1	96	Latching error, 8 × 12 bytes
MC10		0x11	UBAErrorMessages2	60	Blocking errors, 5 × 12 bytes
RC35		0x12	RCErrorMessages	48	Plant error, 4 × 12 bytes
RC35		0x13	RCDeletedErrorMessages	48	reset system errors, 4 × 12 bytes
MC10		0x14	UBABetriebszeit	3	
MC10		0x15	UBAWartungsdaten	5	
MC10		0x16	MC10Parameter	23	
MC10		0x18	UBAMonitorFast	36	
MC10		0x19	UBAMonitorSlow	28	
RCxx		0x1A	UBASollwerte	4	are sent from RC20 / RC3x to UBA
MC10		0x1B		99	Probably synonymous switching times
MC10		0x1C	UBAWartungsmeldungen	12	
RC35		0x1D	UBAFunktionstest	12	write-only, puts the boiler in test mode
WM10		0x1E	WM10Status	2	Message WM10 to RC30 / 35
MC10		0x24		1	
BC10		0x29		1	Sends BC10 to RCxx
MC10		0x2A		23	Depending on the system, eg GB172-24 available
MC10		0x33	UBAParameterWW	11	
MC10		0x34	UBAMonitorWWMessage	18	
RCxx		0x35	flags	2	Activates eg the single charge
RC35		0x37	WWBetriebsart	10	
RC35		0x38	WWSchaltzeiten	99	Switching program hot water see switching times
RC35		0x39	WWZirkSchaltzeiten	99	Circuit program Circulation see switching times
RC35		0x3D	HK1Betriebsart	42	
RC35		0x3E	HK1MonitorMessage	17	(15 bytes at RC30)
RC35		0x3F	HK1Schaltzeiten1	99	Switching program HK1 Eigen1 see switching times
RC35		0x42	HK1Schaltzeiten2	84	Switching program HK1 Eigen2 see switching times
RC35		0x47	HK2Betriebsart	42	
RC35		0x48	HK2MonitorMessage	17	(15 bytes at RC30)
RC35		0x49	HK2Schaltzeiten1	99	Switching program HK2 Eigen1 see switching times
RC35		0x4C	HK2Schaltzeiten2	84	Switching program HK2 Eigen2 see switching times
RC35		0x51	HK3Betriebsart	42	
RC35		0x52	HK3MonitorMessage	17	
RC35		0x53	HK3Schaltzeiten1	99	Switching program HK3 Eigen1 see switching times
RC35		0x56	HK3Schaltzeiten2	84	Switching program HK3 Eigen2 see switching times
RC35		0x5B	HK4Betriebsart	42	
RC35		0x5C	HK4MonitorMessage	17	

source	aim	Type	Surname	length	comment
RC35		0x5D	HK4Schaltzeiten1	99	Switching program HK4 Eigen1 see switching times
RC35		0x60	HK4Schaltzeiten2	84	Switching program HK4 Eigen2 see switching times
SM10		0x96	parameters solar		
SM10		0x97	monitor solar	13	
WM10		0x9C	WM10Status2	5	Message WM10 to All
RC35		0x9D	WM10Parameter	1	Command to WM10
RC35		0xA2		15	
RC35		0xA3	RCOutdoorTempMessage	14	
RC35		0xA4	RCKontaktdaten	42	2 lines each with 21 ASCII bytes
RC35		0xA5	RCAnlagenparameter	25	Location related settings
RC35		0xAA	MM10Parameter	2	Command to MM10
MM10		0xAB	MM10Status	7	Status of the mixer module
RC35		0xAC	MM10Parameter	3	Sends RCxx to MM10
RC20		0xAD		> = 4	
RC20		0xAE	RC20StatusMessage	8th	

Switching times in general

A telegram with switching times has the length of 84 or 99 bytes (data). A switching point contains the two bytes XXX00YYY ZZZZZZZZ

- X = 3Bit = for day (0 = Mo, 1 = Di, 6 = Su, 7 = switching point undefined)
- Y = 3Bit = switching (0 = off, 1 = on, 7 = switching point undefined)
- ZZ = 8Bit = time (00 = 00: 00, ... 8F = 23: 50, 90 = undefined ⇔ Z * 10 min)

Thus, the pattern 0xE7 0x90 is an empty switching point.

There are 42 switching points possible. The remaining 15 bytes contain further information.

version Message

source	aim	Type	begin	bit	bytes	divisor	line	unit	comment
Hex	Hex	Hex	December	December	December	December			
xx	00	02	6		1		numeric		Version major number
xx	00	02	7		1		numeric		Version minor number

RCTimeMessage

source	aim	Type	begin	bit	bytes	divisor	line	unit	comment
Hex	Hex	Hex	December	December	December	December			
10	00	06	5		1	1 (+2000)	numeric	J	System time year
10	00	06	6		1	1	numeric	M	System time month
10	00	06	7		1	1	numeric	H	System time hours
10	00	06	8th		1	1	numeric	T	System time days
10	00	06	9		1	1	numeric	min	System time minutes
10	00	06	10		1	1	numeric	s	System time seconds
10	00	06	11		1		enum	WT	Day of the week (0 = Mo ... 6 = SO)
10	00	06	12	0			digital		Summertime
10	00	06	12	1			digital		Radio Clock
10	00	06	12	2			digital		Time faulty
10	00	06	12	3			digital		Date incorrect
10	00	06	12	4			digital		Clock is running

UBAErrorMessages1

RCErrorMessages

These messages consist of nx 12 bytes. Each block has the same structure

source	aim	Type	begin	bit	bytes	divisor	line	unit	comment
Hex	Hex	Hex	December	December	December	December			
10	00	10/11/12	5		2		ASCII		display code
10	00	xx	7		2		numeric		error number
10	00	xx	9		1		numeric		Bit 7..1 year + 2000, bit 8 - date / time follows
10	00	xx	10		1		numeric		month
10	00	xx	11		1		numeric		hour
10	00	xx	12		1		numeric		Day
10	00	xx	13		1		numeric		minute
10	00	xx	14		2		numeric	min	duration
10	00	xx	16		1		numeric		Bus address of the error source

UBABetriebszeit

source	aim	Type	begin	bit	bytes	divisor	line	unit	comment
Hex	Hex	Hex	December	December	December	December			
10	00	14	5		3		numeric	min	Total operating time

UBAWartungsdaten

source	aim	Type	begin	bit	bytes	divisor	line	unit	comment
Hex	Hex	Hex	December	December	December	December			
08	00	15	5		1		numeric		Maintenance messages (0 = none, 1 = after operating hours, 2 = after date)
08	00	15	6		1	12:01	numeric		Operating hours before maintenance in 100h
08	00	15	7		1		numeric		Maintenance date day
08	00	15	8th		1		numeric		Maintenance date month
08	00	15	9		1		numeric		Maintenance date year

MC10Parameter

source	aim	Type	begin	bit	bytes	divisor	line	unit	comment
Hex	Hex	Hex	December	December	December	December			
08	00	16	5		1		numeric		Heating on boiler activated 0 = no, 255 = yes
08	00	16	6		1		numeric	° C	Heating temperature setting on the boiler
08	00	16	7		1		numeric	%	Boiler output max
08	00	16	8th		1		numeric	%	Boiler output min
08	00	16	9		1		numeric	° C	Shutdown hysteresis (relative to flow setpoint, positive value, eg 0x06)
08	00	16	10		1		numeric	° C	Switch-on hysteresis (relative to supply setpoint, negative value, eg 0xfa)
08	00	16	11		1		numeric	min	Anti commute
08	00	16	13		1		numeric	min	Boiler pump overrun
08	00	16	14		1		numeric	%	Boiler circuit pump modulation max. power
08	00	16	15		1		numeric	%	Boiler circuit pump modulation min. power

UBAMonitorFast

Status message of the UBA with high frequency

Section.	Rec.	Type	begin	bit	bytes	divisor	line	unit	comment
Hex	Hex	Hex	December	December	December	December			
08	00	18	5		1	1	analogous	° C	Flow setpoint temperature
08	00	18	6		2	10	digital	° C	Flow actual temperature
08	00	18	8th		1	1	digital	%	Boiler maximum power
08	00	18	9		1	1	digital	%	Boiler current performance
08	00	18	12	0	1		digital		Gas fitting ON
08	00	18	12	2	1		digital		Blower ON
08	00	18	12	3	1		digital		Ignition ON
08	00	18	12	5	1		digital		Boiler circuit pump ON
08	00	18	12	6	1		digital		3-way valve on WW
08	00	18	12	7	1		digital		Circulation ON
08	00	18	14		2	10	analogous	° C	Temperature (DL heater?) (Missing = 0x8000)
08	00	18	16		2	10	analogous	° C	Water temperature (missing = 0x8000)
08	00	18	18		2	10	analogous	° C	Return temperature (missing = 0x8000)
08	00	18	20		2	10	analogous	uA	flame current
08	00	18	22		1	10	analogous	bar	System pressure (missing = 0xff)
08	00	18	23		1		ASCII		Service Code 1st character
08	00	18	24		1		ASCII		Service code 2.characters
08	00	18	25		2	1	numeric		Error code (Hi, Lo)
08	00	18	30		2	10	analogous	° C	intake

UBAMonitorSlow

Status message of the UBA with low frequency

source	aim	Type	begin	bit	bytes	divisor	line	unit	comment
Hex	Hex	Hex	December	December	December	December			
08	00	19	5		2	10	2	° C	outside temperature
08	00	19	7		2	10	2	° C	Boiler actual temperature (if sensor is missing, 0x8000)
08	00	19	9		2	10	2	° C	Exhaust gas temperature (if sensor is missing, 0x8000)
08	00	19	14		1	0		%	pump modulation
08	00	19	15		3	0			burner starts
08	00	19	18		3	0		min	Operating time complete (burner)
08	00	19	21		3	0		min	Operating time burner stage 2
08	00	19	24		3	0		min	Heat up operating time
08	00	19	27		3	0		min	another time

UBASollwerte

With this telegram the room controller controls the burner.

source	aim	Type	begin	bit	bytes	divisor	line	unit	comment
Hex	Hex	Hex	December	December	December	December			
10/17	08	1A	5		1	1	analogous	° C	Boiler setpoint temperature
10/17	08	1A	6		1	1	numeric	%	0 or 100 power request HK (?)
10/17	08	1A	7		1	1	numeric	%	0 or 100 power requirement WW (?)
10/17	08	1A	8th		1				always 0

UBAWartungsmeldung

source	aim	Type	begin	bit	bytes	divisor	line	unit	comment
Hex	Hex	Hex	December	December	December	December			
08	00	1C	10		1		numeric		Maintenance due (0 = no, 3 = yes, because of operating hours, 8 = yes, because of date)

UBA function test (write only)

For the function test, the following frame must be sent periodically to the MC10. The UBA then activates the respective function as requested. Unauthorized combinations prevents the UBA **(without guarantee, use at your own risk !!)** . At the end of the test you should end the test mode properly with 0x00.

source	aim	Type	begin	bit	bytes	divisor	line	unit	comment
Hex	Hex	Hex	December	December	December	December			
00	0B	1D	5		1		numeric		Test mode (0x5a = on, 0x00 = off)
00	0B	1D	6		1		numeric		Burner output in%
00	0B	1D	7		1		numeric		unknown, for safety's sake 0x00
00	0B	1D	8th		1		numeric		Boiler pump capacity in%
00	0B	1D	9		1		numeric		3-way valve (0 = heating circuit, 255 = hot water)
00	0B	1D	10		1		numeric		Circulation pump (0 = off, 255 = on)
00	0B	1D	11		1		numeric		unknown, for safety's sake 0x00
00	0B	1D	12		1		numeric		unknown, for safety's sake 0x00
00	0B	1D	13		1		numeric		unknown, for safety's sake 0x00
00	0B	1D	14		1		numeric		unknown, for safety's sake 0x00
00	0B	1D	15		1		numeric		unknown, for safety's sake 0x00

WM10Status

source	aim	Type	begin	bit	bytes	divisor	line	unit	comment
Hex	Hex	Hex	December	December	December	December			
11	08	1E	5		2	10	analogous	° C	temperature

UBAParameterWW

source	aim	Type	begin	bit	bytes	divisor	line	unit	comment
Hex	Hex	Hex	December	December	December	December			
08	00	33	5	3			digital		WW system available
08	00	33	6		1	1	analogous		DHW on the boiler activated 0 = no, 255 = yes
08	00	33	7		1	1	analogous	° C	DHW setpoint temperature (if boiler is not set to AUT, the value set there is fixed. If boiler is set to AUT, this value can be written and changed at RC3x.)
08	00	33	11		1	1	digital		Circulation pump available: 0-no, 255-yes
08	00	33	12		1	1	numeric		Num. Switching points Zirk-Pumpe 1..6 = 1x3min..6x3min, 7 constantly on
08	00	33	13		1	1	analogous	° C	Target temperature thermal disinfection
08	00	33	14		1		Digital		DHW mode on boiler 0 = Comfort, 0xDB = ECO
08	00	33	15		1	1	digital		Type of WW system: 0-charge pump, 255 3-W valve

UBAMonitorWWMessage

source	aim	Type	begin	bit	bytes	divisor	line	unit	comment
Hex	**Hex**	**Hex**	**December**	**December**	**December**	**December**			
08	00	34	5		1	1	analogous	° C	Hot water temperature target
08	00	34	6		2	10	analogous	° C	Hot water temperature is
08	00	34	8th		2	10	analogous	° C	Hot water temperature Is 2nd sensor
08	00	34	10	0			digital		daytime
08	00	34	10	1			digital		once charge
08	00	34	10	2			digital		Thermal disinfection
08	00	34	10	3			digital		Water heating
08	00	34	10	4			digital		DHW reloading
08	00	34	10	5			digital		Hot water temperature OK
08	00	34	11	0			digital		Sensor 1 defective
08	00	34	11	1			digital		Sensor 2 defective
08	00	34	11	2			digital		Disruption WW
08	00	34	11	3			digital		Disruption Disinfection
08	00	34	12	0			digital		Circulation daytime operation
08	00	34	12	1			digital		Circulation Manually started
08	00	34	12	2			digital		Circulation is going on
08	00	34	12	3			digital		Charging process WW is running
08	00	34	13		1		digital		Type of hot water system su
08	00	34	14		1	10	analogous	l / min	WW flow
08	00	34	15		3		numeric	min	Water heating time
08	00	34	18		3		numeric		heaters of supply water

Type of hot water system

- 0: no hot water
- 1: according to continuous flow principle
- 2: flow principle with small memory
- 3: storage principle

flags

source	aim	Type	begin	bit	bytes	divisor	line	unit	comment
Hex	**Hex**	**Hex**	**December**	**December**	**December**	**December**			
xx	08	35	5		1		numeric		write from dec.35 = start single charge, 3 = stop single charge

WWBetriebsart

Status message of the RC35 to all.

source	aim	Type	begin	bit	bytes	divisor	line	unit	comment
Hex	**Hex**	**Hex**	**December**	**December**	**December**	**December**			
10	00	37	5		1		digital		Program hot water 0 = like heating circuits, 255 = own program
10	00	37	6		1		digital		Program circulation 0 = like hot water, 255 = own program
10	00	37	7		1		digital		Operating mode WW 0-off, 1-on, 2-car
10	00	37	8th		1		digital		Operating mode circulation pump 0-off, 1-on, 2-Auto
10	00	37	9		1		digital		Thermal disinfection 0-Off, 255-On
10	00	37	10		1		numeric		Thermal disinfection day of the week 0..6 = Mo..So, 7 = daily
10	00	37	11		1		numeric		Thermal disinfection hour
10	00	37	13		1		analogous	° C	Maximum hot water temperature
10	00	37	14		1		digital		One-time charge button 0-Off, 255-On

HK1Betriebsart

Status message of the RC35 to all.

The other heating circuits are type **0x47, 0x51, 0x5B.**

source	aim	Type	begin	bit	bytes	divisor	line	unit	comment
Hex	Hex	Hex	December	December	December	December			
10	00	3D	5		1		digital		Type of heating: 1 radiator, 2 convectors, 3 floors, 4 room supply
10	00	3D	6		1	2	analogous	° C	Room temperature night
10	00	3D	7		1	2	analogous	° C	Room temperature day
10	00	3D	8th		1	2	analogous	° C	Room temperature holidays
10	00	3D	9		1	2	analogous	° C	Max. Room temperature influence
10	00	3D	11		1	2	analogous	° C	Room temperature offset
10	00	3D	12		1		digital		Operating mode heating circuit 0-night, 1-day, 2-car
10	00	3D	13		1		digital		Screed drying 0-Off, 255-On
10	00	3D	20		1	1	analogous	° C	Maximum flow temperature
10	00	3D	21		1	1	analogous	° C	Minimum flow temperature
10	00	3D	22		1	1	analogous	° C	design temperature
10	00	3D	24		1		digital		Optimization of switching program 0-Off, 255-On
10	00	3D	27		1	1	analogous	° C	Threshold summer / winter operation
10	00	3D	28		1	1	analogous	° C	Frost protection temperature
10	00	3D	30		1		digital		Operating mode 0 switch-off mode, 1-reduced mode, 2-room hold mode, 3-outdoor hold mode
10	00	3D	31		1		digital		Remote control type 0-None, 1-RC20, 2-RC3x
10	00	3D	33		1		digital		Frost protection 0-no, 1-outside temperature, 2-room temperature 5 ° C
10	00	3D	37		1		digital		Heating system 1-radiator, 2-convector, 3-floor [only RC35]
10	00	3D	38		1		digital		Reference variable 0-outside temperature-controlled, 1-room temperature controlled [only with RC35]
10	00	3D	39		1		digital		0 of
10	00	3D	40		1	1	analogous	° C	maximum flow temperature [like offset 20, only available with RC35]
10	00	3D	41		1	1	analogous	° C	Design temperature (flow temperature at minimum outside temperature (eg at -10 ° C)) [like offset 22, only available with RC35]
10	00	3D	42		1	2	analogous	° C	Temporary room temperature (until the next switching point, 0 = cancel) [only with RC35]
10	00	3D	43		1	1	analogous	° C	Lowering interrupted under [only RC35]
10	00	3D	44		1	1	analogous	° C	Temperature Threshold Reduced / Off mode during outdoor stop Normal operation [only with RC35]
10	00	3D	45		1	1	analogous	° C	Temperature threshold Reduced / shutdown mode with outdoor hold Holiday operation [only with RC35]
10	00	3D	46		1		digital		Lowering holiday 2-room holding operation, 3-outdoor holding operation [only with RC35]

HK1MonitorMessage

Statusnachricht der RC35 an alle. Die übrigen Heizkreise sind Typ **0x48, 0x52, 0x5C.**

Quelle	Ziel	Typ	Start	Bit	Bytes	Divisor	Linie	Einheit	Bemerkung
Hex	Hex	Hex	Dez	Dez	Dez	Dez			
10	00	3E	5	0	1		digital		Ausschaltoptimierung
10	00	3E	5	1	1		digital		Einschaltoptimierung
10	00	3E	5	2	1		digital		Automatikbetrieb
10	00	3E	5	3	1		digital		WW-Vorrang
10	00	3E	5	4	1		digital		Estrichtrocknung
10	00	3E	5	5	1		digital		Urlaubsbetrieb
10	00	3E	5	6	1		digital		Frostschutz
10	00	3E	5	7	1		digital		Manuell
10	00	3E	6	0	1		digital		Sommerbetrieb
10	00	3E	6	1	1		digital		Tagbetrieb
10	00	3E	6	2	1		digital		keine Kommunikation mit FB (?)
10	00	3E	6	3	1		digital		FB fehlerhaft (?)
10	00	3E	6	4	1		digital		Fehler Vorlauffühler (?)
10	00	3E	6	5	1		digital		maximaler Vorlauf
10	00	3E	6	6	1		digital		externer Störeingang (?)
10	00	3E	6	7	1		digital		Party- Pausebetrieb
10	00	3E	7		1	2	analog	°C	Raumtemperatur Soll
10	00	3E	8		2	10	analog	°C	Raumtemperatur Ist (0x7d00 für HK abgeschaltet)
10	00	3E	10		1	1	analog	min	Einschaltoptimierungszeit
10	00	3E	11		1	1	analog	min	Ausschaltoptimierungszeit
10	00	3E	12		1	1	analog	°C	Heizkreis1 Heizkurve 10°C
10	00	3E	13		1	1	analog	°C	Heizkreis1 Heizkurve 0°C
10	00	3E	14		1	1	analog	°C	Heizkreis1 Heizkurve -10°C
10	00	3E	15		2	100	analog	K/min	Raumtemperatur-Änderungsgeschwindigkeit
10	00	3E	17		1	1	analog	%	Von diesem Heizkreis angeforderte Kesselleistung
10	00	3E	18	0	1		digital		Schaltzustand ???
10	00	3E	18	1	1		digital		Schaltzustand ???
10	00	3E	18	2	1		digital		Schaltzustand Party
10	00	3E	18	3	1		digital		Schaltzustand Pause
10	00	3E	18	4	1		digital		Schaltzustand ???
10	00	3E	18	5	1		digital		Schaltzustand ???
10	00	3E	18	6	1		digital		Schaltzustand Urlaub
10	00	3E	18	7	1		digital		Schaltzustand Ferien
10	00	3E	19		1	1	analog	°C	Berechnete Solltemperatur Vorlauf
10	00	3E	20	1?			digital		keine Raumtemperatur
10	00	3E	20	2?			digital		keine Absenkung
10	00	3E	20	3?			digital		Heizbetrieb an BC10 abgeschaltet

(Start) Byte 20 gibt es nicht bei RC30

HK1Schaltzeiten

Siehe auch http://www.mikrocontroller.net/topic/210031#2921920 [http://www.mikrocontroller.net/topic/210031#2921920]

Quelle	Ziel	Typ	Start	Bit	Bytes	Divisor	Linie	Einheit	Bemerkung
Hex	Hex	Hex	Dez	Dez	Dez	Dez			
10	00	3F	5		1				erstes Byte Wochentag + Schaltpunkt (siehe Schaltzeiten allgemein)
10	00	3F	6		1				erstes Byte Schaltzeit (siehe Schaltzeiten allgemein)
10	00	3F	87		1				letztes Byte Wochentag + Schaltpunkt (siehe Schaltzeiten allgemein)
10	00	3F	88		1				letztes Byte Schaltzeit (siehe Schaltzeiten allgemein)
10	00	3F	89		1				Schaltprog. 0x00 - 0x0a (Eigen1, Familien, Morgen, Früh, Abend, Vorm., Nachm., Mittag, Single, Senioren, Eigen2)
10	00	3F	90		1			h	restl. Pausenzeit (durch Setzen kann die Pause gestartet werden)
10	00	3F	91		1			h	restl. Partyzeit (durch Setzen kann die Party gestartet werden)
10	00	3F	92		1				Tag / Urlaubsanfang Heizkreis 1
10	00	3F	93		1				Monat / Urlaubsanfang Heizkreis 1
10	00	3F	94		1				Jahr (+2000) / Urlaubsanfang Heizkreis 1
10	00	3F	95		1				Tag / Urlaubsende Heizkreis 1
10	00	3F	96		1				Monat / Urlaubsende Heizkreis 1
10	00	3F	97		1				Jahr (+2000) / Urlaubsende Heizkreis 1
10	00	3F	98		1				Tag / Feiertagsanfang Heizkreis 1
10	00	3F	99		1				Monat / Feiertagsanfang Heizkreis 1
10	00	3F	100		1				Jahr (+2000) / Feiertagssanfang Heizkreis 1
10	00	3F	101		1				Tag / Feiertagsende Heizkreis 1
10	00	3F	102		1				Monat / Feiertagsende Heizkreis 1
10	00	3F	103		1				Jahr (+2000) / Feiertagsende Heizkreis 1

HK2MonitorMessage

Typ 0x48: siehe HK1MonitorMessage

HK2Schaltzeiten

Typ 0x49: siehe HK1Schaltzeiten

SM10Parameter

Quelle	Ziel	Typ	Start	Bit	Bytes	Divisor	Linie	Einheit	Bemerkung
Hex	Hex	Hex	Dez	Dez	Dez	Dez			
30	00	96	4		1		analog		Betriebsart
30	00	96	5		1	1	analog	°C	Speicher Max. Temperatur
30	00	96	6		1	1	analog	°C	Speicher Min. Temperatur

SM10Monitor

Quelle	Ziel	Typ	Start	Bit	Bytes	Divisor	Linie	Einheit	Bemerkung
Hex	Hex	Hex	Dez	Dez	Dez	Dez			
30	00	97	7		2	10	analog	°C	Kollektortemperatur
30	00	97	9		1		digital	%	Modulation Solarpumpe
30	00	97	10		2	10	analog	°C	Temperatur Speicher unten
30	00	97	11	1	1		digital		Pumpe(gesetzt=EIN)
30	00	97	13		3		analog	Min.	Betriebszeit
30	00	97	16		1				???

WM10Parameter

Quelle	Ziel	Typ	Start	Bit	Bytes	Divisor	Linie	Einheit	Bemerkung
Hex	Hex	Hex	Dez	Dez	Dez	Dez			
10	11	9B	5		1	1	numerisch		Aktivierung 0=aus 255=an

WM10Status2

Quelle	Ziel	Typ	Start	Bit	Bytes	Divisor	Linie	Einheit	Bemerkung
Hex	Hex	Hex	Dez	Dez	Dez	Dez			
11	00	9C	3		2	10	analog	°C	Temperatur
11	00	9C	5		1	1	analog	%	???

RCTempMessage

Statusnachricht der RC35

Quelle	Ziel	Typ	Start	Bit	Bytes	Divisor	Linie	Einheit	Bemerkung
Hex	Hex	Hex	Dez	Dez	Dez	Dez			
10	00	A3	5	0	1	1	2	°C	gedämpfte Außentemperatur
10	00	A3	6	0	1	1	2	°C	Flag 1
10	00	A3	7	0	1	1	2	°C	Flag 2
10	00	A3	8	0	2	10	2	°C	Raum-Ist
10	00	A3	10	0	2	10	2	°C	Temperatur 1
10	00	A3	12	0	2	10	2	°C	Temperatur 2
10	00	A3	14	0	2	?	2	?	Sensor? (0x8300 = Nicht vorhanden)
10	00	A3	16	0	2	?	2	?	Sensor? (0x8300 = Nicht vorhanden)

Temperatur 2 folgt Temperatur 1 mit leichter Verzögerung.

Anlagenparameter

Quelle	Ziel	Typ	Start	Bit	Bytes	Divisor	Linie	Einheit	Bemerkung
Hex	Hex	Hex	Dez	Dez	Dez	Dez			
10	00	A5	10		1		numerisch	°C	Minimale Aussentemperatur (i.a. -10°C)
10	00	A5	11		1		numerisch		Gebäudeart 0=leicht, 1=mittel, 2=schwer
10	00	A5	26		1		numerisch		Dämpfung Aussentemperatur 0=deaktiviert, 255=aktiviert

MM10Status

Statusnachricht des Mischers

Quelle	Ziel	Typ	Start	Bit	Bytes	Divisor	Linie	Einheit	Bemerkung
Hex	Hex	Hex	Dez	Dez	Dez	Dez			
21	00	AB	5		1	1	analog	°C	Vorlaufsoll
21	00	AB	6		2	10	analog	°C	Vorlaufist
21	00	AB	8		1	1	analog	%	Stand

MM10Parameter

Grundeinstellungen des Mischers

Quelle	Ziel	Typ	Start	Bit	Bytes	Divisor	Linie	Einheit	Bemerkung
Hex	Hex	Hex	Dez	Dez	Dez	Dez			
10	21	AA	5		1	1	numerisch		Mischeraktivierung 0=aus 255=an
10	21	AA	6		1	0.1	analog	min	Mischernachlaufzeit

MM10Parameter

Paremeter für den Mischer

Quelle	Ziel	Typ	Start	Bit	Bytes	Divisor	Linie	Einheit	Bemerkung
Hex	**Hex**	**Hex**	**Dez**	**Dez**	**Dez**	**Dez**			
10	21	AC	5		1	1	analog	°C	Vorlaufsoll
10	21	AC	6		1	1	analog	%	Stand

, Byte 5 ggf. SollTemp, Byte 6 ist %, Byte 7 Flags

RC20StatusMessage

Statusnachricht der RC20

Quelle	Ziel	Typ	Start	Bit	Bytes	Divisor	Linie	Einheit	Bemerkung
Hex	**Hex**	**Hex**	**Dez**	**Dez**	**Dez**	**Dez**			
17	00	AE	5	7			digital		Tag/Nachtbetrieb
17	00	AE	7		1	2	analog	°C	Should room temp.
17	00	AE	8th		2	10	analogous	° C	Is room temp.