Zelsius C5 Standard M-Bus Telegram, Standard Base Type

The main Heat meter

REQ_UD2: 10 7B FE 79 16 **Main telegram**

C5 Fertigungsversion

Raw data	Information	Format	Note
Header			
68 9D 9D 68	RSP_UD, length	68 LL LL 68	
08 00 72	C Field, Adress, CI Field	08 00 72	Primary 000
83 44 01 33	Serial number	SS SS SS SS	Sec. 33014483
49 6A	Manufacturer	ZRI	
88	Version	136	
0D	Medium	04 - Heat outlet	
		0C - Heat inlet	
		0D - Heat/Cool (Changover)	
		0B - Cooling outlet	
		0A - Cooling inlet	
4F	Acces number		
00	Status		
0000	Signature		
Parameterlist	Long frame - See below		
C3	Checksum	CS	
16	Stopbit	16	

Parameterlist

Data, long frame

Register Nr.	Raw data	Information	Unit	DIF/VIF	Note	ZDF	Value	Einheit Relay	Value	SP-Nr.	Tarif
1	0C 78 83 44 01 33	Identification number		0Ch 78h		FAB	33104483				
2	04 05 00 00 00 00	Heating energy	Wh*10^2 (Display 0.0kWh)	04h 05h		MWH	0.0				
	04 06 00 00 00 00		Wh*10^3 (Display 0kWh)	04h 06h		MWH	0				
	04 06 00 00 00 00		Wh*10^3 (Display 0.000MWh)	04h 06h		MWH	0.000	kWh	0		0
	04 07 00 00 00 00		Wh*10^4 (Display 0.00MWh)	04h 07h		MWH	0.00				
	04 0E 00 00 00 00		J*10^6 (Display 0.000GJ)	04h 0Eh		GJ	0.000	MJ	0		
	04 0F 01 00 00 00		J*10^7 (Display 0.00GJ)	04h 0Fh		GJ	0.00	MJ	0		
3	82 04 6C 01 A1	Due date heating	dd.mm.yy	82h 04h 6Ch		TIMP[8]	01.01.1980		01.01.80	8	0
4	C2 84 00 6C 01 A1	Due date heating last year	dd.mm.yy	C2h 84h 00h 6Ch		TIMP[9]	01.01.1980		01.01.80	9	0
5	84 04 05 00 00 00 00	Heating energy on due date	Wh*10^2 (Display 0.0kWh)	84h 04h 05h		MWH[8]	0.0				
	84 04 06 00 00 00 00		Wh*10^3 (Display 0kWh)	84h 04h 06h		MWH[8]	0				
	84 04 06 00 00 00 00		Wh*10^3 (Display 0.000MWh)	84h 04h 06h		MWH[8]	0.000	kWh	0	8	0
	84 04 07 00 00 00 00		Wh*10^4 (Display 0.00MWh)	84h 04h 07h		MWH[8]	0.00				
	84 04 0E 00 00 00 00		J*10^6 (Display 0.000GJ)	84h 04h 0Eh		GJ[8]	0.000				
	84 04 0F 00 00 00 00		J*10^7 (Display 0.00GJ)	84h 04h 0Fh		GJ[8]	0.00				
6	C4 84 00 05 00 00 00 00	Heating energy dd last year	Wh*10^2 (Display 0.0kWh)	C4h 84h 00h 05h		MWH[9]	0.0				
	C4 84 00 06 00 00 00 00		Wh*10^3 (Display 0kWh)	C4h 84h 00h 06h		MWH[9]	0				
	C4 84 00 06 00 00 00 00		Wh*10^3 (Display 0.000MWh)	C4h 84h 00h 06h		MWH[9]	0.000	kWh	0	9	0
	C4 84 00 07 00 00 00 00		Wh*10^4 (Display 0.00MWh)	C4h 84h 00h 07h		MWH[9]	0.00				
	C4 84 00 0E 00 00 00 00		J*10^6 (Display 0.000GJ)	C4h 84h 00h 0Eh		GJ[9]	0.000				
	C4 84 00 0F 00 00 00 00		J*10^7 (Display 0.00GJ)	C4h 84h 00h 0Fh		GJ[9]	0.00				
7	82 8A 00 6C A1 18	Time point last Month heating counsumption	dd.mm.yy	82h 8Ah 00h 6Ch		TIMP[20]	01.08.2013		01.08.13	20	0
8	84 8A 00 05 00 00 00 00	Heating consumption last Month	Wh*10^2 (Display 0.0kWh)	84h 8Ah 00h 05h		MWH[20]	0.0				
	84 8A 00 06 00 00 00 00		Wh*10^3 (Display 0kWh)	84h 8Ah 00h 06h		MWH[20]	0				
	84 8A 00 06 00 00 00 00		Wh*10^3 (Display 0.000MWh)	84h 8Ah 00h 06h		MWH[20]	0.000	kWh	0	20	0
	84 8A 00 07 00 00 00 00		Wh*10^4 (Display 0.00MWh)	84h 8Ah 00h 07h		MWH[20]	0.00				
	84 8A 00 0E 00 00 00 00		J*10^6 (Display 0.000GJ)	84h 8Ah 00h 0Eh		GJ[20]	0.000				
	84 8A 00 0F 00 00 00 00		J*10^7 (Display 0.00GJ)	84h 8Ah 00h 0Fh		GJ[20]	0.00				
9	84 10 05 00 00 00 00	Cooling Energy	Wh*10^2 (Display 0.0kWh)	84h 10h 05h		MWH_TAR[1]	0.0				
	84 10 06 00 00 00 00		Wh*10^3 (Display 0kWh)	84h 10h 06h		MWH_TAR[1]	0				
	84 10 06 00 00 00 00		Wh*10^3 (Display 0.000MWh)	84h 10h 06h		MWH_TAR[1]	0.000	kWh	0		1
	84 10 07 00 00 00 00		Wh*10^4 (Display 0.00MWh)	84h 10h 07h		MWH_TAR[1]	0.00				
	84 10 0E 00 00 00 00		J*10^6 (Display 0.000GJ)	84h 10h 0Eh		GJ_TAR[1]	0.000				
	84 10 0F 00 00 00 00		J*10^7 (Display 0.00GJ)	84h 10h 0Fh		GJ_TAR[1]	0.00				

10	82 14 6C 01 A1	Due date cooling	dd.mm.yy	82h 14h 6Ch		TIMP[8]_TAR[1]	01.01.1980		01.01.80	8	1
11	C2 94 00 6C 01 A1	Due date cooling last year	dd.mm.yy	C2h 94h 00h 6Ch		TIMP[9]_TAR[1]	01.01.1980		01.01.80	9	1
	84 14 05 00 00 00 00	Cooling energy on due date	Wh*10^2 (Display 0.0kWh)	84h 14h 05h		MWH[8]_TAR[1]	0.0				
	84 14 06 00 00 00 00		Wh*10^3 (Display 0kWh)	84h 14h 06h		MWH[8]_TAR[1]	0				
12	84 14 06 00 00 00 00		Wh*10^3 (Display 0.000MWh)	84h 14h 06h		MWH[8]_TAR[1]	0.000	kWh	0	8	1
	84 14 07 00 00 00 00		Wh*10^4 (Display 0.00MWh)	84h 14h 07h		MWH[8]_TAR[1]	0.00				
	84 14 0E 00 00 00 00		J*10^6 (Display 0.000GJ)	84h 14h 0Eh		GJ[8]_TAR[1]	0.000				
	84 14 0F 00 00 00 00		J*10^7 (Display 0.00GJ)	84h 14h 0Fh		GJ[8]_TAR[1]	0.00				
	C4 94 00 05 00 00 00 00	Cooling energy dd last year	Wh*10^2 (Display 0.0kWh)	C4h 94h 00h 05h		MWH[9]_TAR[1]	0.0				
	C4 94 00 06 00 00 00 00		Wh*10^3 (Display 0kWh)	C4h 94h 00h 06h		MWH[9]_TAR[1]	0				
13	C4 94 00 06 00 00 00 00		Wh*10^3 (Display 0.000MWh)	C4h 94h 00h 06h		MWH[9]_TAR[1]	0.000	kWh	0	9	1
	C4 94 00 07 00 00 00 00		Wh*10^4 (Display 0.00MWh)	C4h 94h 00h 07h		MWH[9]_TAR[1]	0.00				
	C4 94 00 0E 00 00 00 00		J*10^6 (Display 0.000GJ)	C4h 94h 00h 0Eh		GJ[9]_TAR[1]	0.000				
	C4 94 00 0F 00 00 00 00		J*10^7 (Display 0.00GJ)	C4h 94h 00h 0Fh		GJ[9]_TAR[1]	0.00				
14	82 9A 00 6C A1 18	Time point last Month cooling counsumption	dd.mm.yy	82h 9Ah 00h 6Ch		TIMP[20]_TAR[1]	01.08.2013		01.08.13	20	1
	84 9A 00 05 00 00 00 00	Cooling energy consumption last Month	Wh*10^2 (Display 0.0kWh)	84h 9Ah 00h 05h		MWH[20]_TAR[1]	0.0				
	84 9A 00 06 00 00 00 00		Wh*10^3 (Display 0kWh)	84h 9Ah 00h 06h		MWH[20]_TAR[1]	0				
15	84 9A 00 06 00 00 00 00		Wh*10^3 (Display 0.000MWh)	84h 9Ah 00h 06h		MWH[20]_TAR[1]	0.000	kWh	0	20	1
	84 9A 00 07 00 00 00 00		Wh*10^4 (Display 0.00MWh)	84h 9Ah 00h 07h		MWH[20]_TAR[1]	0.00				
	84 9A 00 0E 00 00 00 00		J*10^6 (Display 0.000GJ)	84h 9Ah 00h 0Eh		GJ[20]_TAR[1]	0.000				
	84 9A 00 0F 00 00 00 00		J*10^7 (Display 0.00GJ)	84h 9Ah 00h 0Fh		GJ[20]_TAR[1]	0.00				
16	04 13 00 00 00 00	Heating/Cooling volume	L*10^-3 (Display 0.000L)	04h 13h		QM	0				
	04 13 00 00 00 00		L (Display 0L)	04h 13h		QM	0.000	L	0		
17	02 59 A6 23	Forward Temperature	°C	02h 59h		TF	91.28	°C	91.28		
18	02 5D 57 02	Return Temperature	°C	02h 5Dh		TR	5.99	°C	5.99		
19	02 61 4F 21	Temperature difference	K	02h 61h		TD	85.29	K	85.29		
	04 2A 00 00 00 00	Heating/Cooling power	W (Display 0.0W)	04h 2Ah		kW	0.0				
	04 2B 00 00 00 00		W (Display 0.000kW)	04h 2Bh		kW	0.000				
	04 2C 00 00 00 00		W*10 (Display 0.00kW)	04h 2Ch		kW	0.00				
20	04 2D 00 00 00 00		W*10^2 (Display 0.0kW)	04h 2Dh		kW	0.0	kW	0.0	0	0
	04 2E 00 00 00 00		W*10^3 (Display 0.000MW)	04h 2Eh		kW	0.000				
	04 35 00 00 00 00		J/h*10^5 (Display 0.0000GJ/h)	04h 35h		kW	0.0000				
	04 36 00 00 00 00		J/h*10^6 (Display 0.000GJ/h)	04h 36h		kW	0.000				
	04 38 00 00 00 00	Heating/Cooling flowrate	L/h*10^-3 (Display 0.000L/h)	04h 38h		QMPH	0.000				
	04 39 00 00 00 00		L/h*10^-2 (Display 0.00L/h)	04h 39h		QMPH	0.00				
	04 3A 00 00 00 00		L/h*10^-1 (Display 0.0L/h)	04h 3Ah		QMPH	0.0				
	04 3B 00 00 00 00		L/h (Display 0L/h)	04h 3Bh		QMPH	0				
21	04 3B 00 00 00 00		L/h (Display 0.000m^3/h)	04h 3Bh		QMPH	0.000	l/h	0	0	0
	04 3C 00 00 00 00		L/h*10 (Display 0.00m^3/h)	04h 3Ch		QMPH	0.00				
	04 3D 00 00 00 00		L/h*10^2 (Display 0.0m^3/h)	04h 3Dh		QMPH	0.0				
	04 3E 00 00 00 00		L/h*10^3 (Display 0m^3/h)	04h 3Eh		QMPH	0				
22	04 6D 2C 0A A2 18	Device Date and Time		04h 6Dh 2Ch		TIMP	02.08.2013 10:42				
23	04 26 42 00 00 00	Operating hours		04h 26h		OpHours	66	hours			
24	1F	Following Telegramms		1Fh		More 1					

REQ_UD2: 10 5B FE 79 16 **Following telegram 1 - Heating Monthly logger**

C5 Fertigungsversion

Raw data	Information	Format	Note
Header			
68 D6 D6 68	RSP_UD, length	68 LL LL 68	
08 00 72	C Field, Adress, CI Field	08 00 72	Primary 000
83 44 01 33	Serial number	SS SS SS SS	Sec. 33014483
49 6A	Manufacturer	ZRI	
88	Version	136	
0D	Medium	04 - Heat outlet	
		0C - Heat inlet	
		0D - Heat/Cool (Changover)	
		0B - Cooling outlet	
		0A - Cooling inlet	
50	Acces number		
00	Status		
0000	Signature		
Parameterlist	Long frame - See below		
1F	Checksum	CS	
16	Stopbit	16	

Parameterlist

Data, long frame

Raw data	Information	Unit	DIF/VIF	Note	ZDF	Value	Einheit Relay	Value	SP-Nr.	Tarif
0C 78 83 44 01 33	Identification number		0Ch 78h		FAB	33104483				
84 80 01 05 00 00 00 00	Heating Montly Logger last value (n)	Wh*10^2 (Display 0.0kWh)	84h 80h 01h 05h		MWH[32]	0.0				
84 80 01 06 00 00 00 00	or	Wh*10^3 (Display 0kWh)	84h 80h 01h 06h		MWH[32]	0				
84 80 01 06 00 00 00 00	or	Wh*10^3 (Display 0.000MWh)	84h 80h 01h 06h		MWH[32]	0.000	kWh	0	32	0
84 80 01 07 00 00 00 00	or	Wh*10^4 (Display 0.00MWh)	84h 80h 01h 07h		MWH[32]	0.00				
84 80 01 0E 00 00 00 00	or	J*10^6 (Display 0.000GJ)	84h 80h 01h 0Eh		MWH[32]	0.000				
84 80 01 0F 00 00 00 00	or	J*10^7 (Display 0.00GJ)	84h 80h 01h 0Fh		MWH[32]	0.00				
C4 80 01 05 FF FF FF FF	Heating Montly Logger previous value (n-1)	Wh*10^2 (Display 0.0kWh)	C4h 80h 01h 05h		MWH[33]	0.0				
C4 80 01 06 FF FF FF FF	or	Wh*10^3 (Display 0kWh)	C4h 80h 01h 06h		MWH[33]	0				
C4 80 01 06 FF FF FF FF	or	Wh*10^3 (Display 0.000MWh)	C4h 80h 01h 06h		MWH[33]	0.000	kWh	-1	33	0
C4 80 01 07 FF FF FF FF	or	Wh*10^4 (Display 0.00MWh)	C4h 80h 01h 07h		MWH[33]	0.00				
C4 80 01 0E FF FF FF FF	or	J*10^6 (Display 0.000GJ)	C4h 80h 01h 0Eh		MWH[33]	0.000				
C4 80 01 0F FF FF FF FF	or	J*10^7 (Display 0.00GJ)	C4h 80h 01h 0Fh		MWH[33]	0.00				
84 81 01 05 FF FF FF FF	Heating Monthly Logger previous value (n-2)	Wh*10^2 (Display 0.0kWh)	84h 81h 01h 05h		MWH[34]	0.0				
84 81 01 06 FF FF FF FF	or	Wh*10^3 (Display 0kWh)	84h 81h 01h 06h		MWH[34]	0				
84 81 01 06 FF FF FF FF	or	Wh*10^3 (Display 0.000MWh)	84h 81h 01h 06h		MWH[34]	0.000	kWh	-1	34	0
84 81 01 07 FF FF FF FF	or	Wh*10^4 (Display 0.00MWh)	84h 81h 01h 07h		MWH[34]	0.00				
84 81 01 0E FF FF FF FF	or	J*10^6 (Display 0.000GJ)	84h 81h 01h 0Eh		MWH[34]	0.000				
84 81 01 0F FF FF FF FF	or	J*10^7 (Display 0.00GJ)	84h 81h 01h 0Fh		MWH[34]	0.00				
C4 81 01 06 FF FF FF FF	Heating Monthly Logger previous value (n-x), up to 24 Months	See units above	C4h 81h 01h 06h		MWH[35]	0.000	kWh	-1	35	0
84 82 01 06 FF FF FF FF			82h 82h 01h 06h		MWH[36]	0.000	kWh	-1	36	0
C4 82 01 06 FF FF FF FF			C4h 82h 01h 06h		MWH[37]	0.000	kWh	-1	37	0
84 83 01 06 FF FF FF FF			84h 83h 01h 06h		MWH[38]	0.000	kWh	-1	38	0
C4 83 01 06 00 00 00 00			C4h 83h 01h 06h		MWH[39]	0.000	kWh	0	39	0
84 84 01 06 00 00 00 00			84h 84h 01h 06h		MWH[40]	0.000	kWh	0	40	0
C4 84 01 06 00 00 00 00			C4h 84h 01h 06h		MWH[41]	0.000	kWh	0	41	0
84 85 01 06 00 00 00 00			84h 85h 01h 06h		MWH[42]	0.000	kWh	0	42	0
C4 85 01 06 00 00 00 00			C4h 85h 01h 06h		MWH[43]	0.000	kWh	0	43	0
84 86 01 06 00 00 00 00			84h 86h 01h 06h		MWH[44]	0.000	kWh	0	44	0
C4 86 01 06 00 00 00 00			C4h 86h 01h 06h		MWH[45]	0.000	kWh	0	45	0
84 87 01 06 00 00 00 00			84h 87h 01h 06h		MWH[46]	0.000	kWh	0	46	0
C4 87 01 06 00 00 00 00			C4h 87h 01h 06h		MWH[47]	0.000	kWh	0	47	0
84 88 01 06 00 00 00 00			84h 88h 01h 06h		MWH[48]	0.000	kWh	0	48	0
C4 88 01 06 00 00 00 00			C4h 88h 01h 06h		MWH[49]	0.000	kWh	0	49	0
84 89 01 06 00 00 00 00			84h 89h 01h 06h		MWH[50]	0.000	kWh	0	50	0
C4 89 01 06 00 00 00 00			C4h 89h 01h 06h		MWH[51]	0.000	kWh	0	51	0
84 8A 01 06 00 00 00 00			84h 8Ah 01h 06h		MWH[52]	0.000	kWh	0	52	0
C4 8A 01 06 00 00 00 00			C4h 8Ah 01h 06h		MWH[53]	0.000	kWh	0	53	0
84 8B 01 06 00 00 00 00			84h 8Bh 01h 06h		MWH[54]	0.000	kWh	0	54	0
C4 8B 01 06 00 00 00 00			C4h 8Bh 01h 06h		MWH[55]	0.000	kWh	0	55	0
1F	Following Telegramms		1Fh		More 1					

REQ_UD2: 10 7B FE 79 16 **Following telegram 2 - Cooling Monthly logger**

C5 Fertigungsversion

Raw data	Information	Format	Note
Header			
68 D6 D6 68	RSP_UD, length	68 LL LL 68	
08 00 72	C Field, Adress, CI Field	08 00 72	Primary 000
83 44 01 33	Serial number	SS SS SS SS	Sec. 33014483
49 6A	Manufacturer	ZRI	
88	Version	136	
0D	Medium	04 - Heat outlet	
		0C - Heat inlet	
		0D - Heat/Cool (Changover)	
		0B - Cooling outlet	
		0A - Cooling inlet	
51	Acces number		
00	Status		
0000	Signature		
Parameterlist	Long frame - See below		
9C	Checksum	CS	
16	Stopbit	16	

Parameterlist

Data, long frame

Raw data	Information	Unit	DIF/VIF	Note	ZDF	Value	Einheit Relay	Value	SP-Nr.	Tarif
0C 78 83 44 01 33	Identification number		0Ch 78h		FAB	33104483				
84 90 01 05 00 00 00 00	Cooling Montly Logger last value (n)	Wh*10^2 (Display 0.0kWh)	84h 90h 01h 05h		MWH[32]_TAR[1]	0.0				
84 90 01 06 00 00 00 00	or	Wh*10^3 (Display 0kWh)	84h 90h 01h 06h		MWH[32]_TAR[1]	0				
84 90 01 06 00 00 00 00	or	Wh*10^3 (Display 0.000MWh)	84h 90h 01h 06h		MWH[32]_TAR[1]	0.000	kWh	0	32	1
84 90 01 07 00 00 00 00	or	Wh*10^4 (Display 0.00MWh)	84h 90h 01h 07h		MWH[32]_TAR[1]	0.00				
84 90 01 0E 00 00 00 00	or	J*10^6 (Display 0.000GJ)	84h 90h 01h 0Eh		MWH[32]_TAR[1]	0.000				
84 90 01 0F 00 00 00 00	or	J*10^7 (Display 0.00GJ)	84h 90h 01h 0Fh		MWH[32]_TAR[1]	0.00				
C4 90 01 05 FF FF FF FF	Cooling Montly Logger previous value (n-1)	Wh*10^2 (Display 0.0kWh)	C4h 90h 01h 05h		MWH[33]_TAR[1]	0.0				
C4 90 01 06 FF FF FF FF	or	Wh*10^3 (Display 0kWh)	C4h 90h 01h 06h		MWH[33]_TAR[1]	0				
C4 90 01 06 FF FF FF FF	or	Wh*10^3 (Display 0.000MWh)	C4h 90h 01h 06h		MWH[33]_TAR[1]	0.000	kWh	-1	33	1
C4 90 01 07 FF FF FF FF	or	Wh*10^4 (Display 0.00MWh)	C4h 90h 01h 07h		MWH[33]_TAR[1]	0.00				
C4 90 01 0E FF FF FF FF	or	J*10^6 (Display 0.000GJ)	C4h 90h 01h 0Eh		MWH[33]_TAR[1]	0.000				
C4 90 01 0F FF FF FF FF	or	J*10^7 (Display 0.00GJ)	C4h 90h 01h 0Fh		MWH[33]_TAR[1]	0.00				
84 91 01 05 FF FF FF FF	Cooling Monthly Logger previous value (n-2)	Wh*10^2 (Display 0.0kWh)	84h 91h 01h 05h		MWH[34]_TAR[1]	0.0				
84 91 01 06 FF FF FF FF	or	Wh*10^3 (Display 0kWh)	84h 91h 01h 06h		MWH[34]_TAR[1]	0				
84 91 01 06 FF FF FF FF	or	Wh*10^3 (Display 0.000MWh)	84h 91h 01h 06h		MWH[34]_TAR[1]	0.000	kWh	-1	34	1
84 91 01 07 FF FF FF FF	or	Wh*10^4 (Display 0.00MWh)	84h 91h 01h 07h		MWH[34]_TAR[1]	0.00				
84 91 01 0E FF FF FF FF	or	J*10^6 (Display 0.000GJ)	84h 91h 01h 0Eh		MWH[34]_TAR[1]	0.000				
84 91 01 0F FF FF FF FF	or	J*10^7 (Display 0.00GJ)	84h 91h 01h 0Fh		MWH[34]_TAR[1]	0.00				
C4 91 01 06 FF FF FF FF	Cooling Monthly Logger previous value (n-x), up to 24 Months	See units above	C4h 91h 01h 06h		MWH[35]_TAR[1]	0.000	kWh	-1	35	1
84 92 01 06 FF FF FF FF			82h 92h 01h 06h		MWH[36]_TAR[1]	0.000	kWh	-1	36	1
C4 92 01 06 FF FF FF FF			C4h 92h 01h 06h		MWH[37]_TAR[1]	0.000	kWh	-1	37	1
84 93 01 06 FF FF FF FF			84h 93h 01h 06h		MWH[38]_TAR[1]	0.000	kWh	-1	38	1
C4 93 01 06 00 00 00 00			C4h 93h 01h 06h		MWH[39]_TAR[1]	0.000	kWh	-1	39	1
84 94 01 06 00 00 00 00			84h 94h 01h 06h		MWH[40]_TAR[1]	0.000	kWh	0	40	1
C4 94 01 06 00 00 00 00			C4h 94h 01h 06h		MWH[41]_TAR[1]	0.000	kWh	0	41	1
84 95 01 06 00 00 00 00			84h 95h 01h 06h		MWH[42]_TAR[1]	0.000	kWh	0	42	1
C4 95 01 06 00 00 00 00			C4h 95h 01h 06h		MWH[43]_TAR[1]	0.000	kWh	0	43	1
84 96 01 06 00 00 00 00			84h 96h 01h 06h		MWH[44]_TAR[1]	0.000	kWh	0	44	1
C4 96 01 06 00 00 00 00			C4h 96h 01h 06h		MWH[45]_TAR[1]	0.000	kWh	0	45	1
84 97 01 06 00 00 00 00			84h 97h 01h 06h		MWH[46]_TAR[1]	0.000	kWh	0	46	1
C4 97 01 06 00 00 00 00			C4h 97h 01h 06h		MWH[47]_TAR[1]	0.000	kWh	0	47	1
84 98 01 06 00 00 00 00			84h 98h 01h 06h		MWH[48]_TAR[1]	0.000	kWh	0	48	1
C4 98 01 06 00 00 00 00			C4h 98h 01h 06h		MWH[49]_TAR[1]	0.000	kWh	0	49	1
84 99 01 06 00 00 00 00			84h 99h 01h 06h		MWH[50]_TAR[1]	0.000	kWh	0	50	1
C4 99 01 06 00 00 00 00			C4h 99h 01h 06h		MWH[51]_TAR[1]	0.000	kWh	0	51	1
84 9A 01 06 00 00 00 00			84h 9Ah 01h 06h		MWH[52]_TAR[1]	0.000	kWh	0	52	1
C4 9A 01 06 00 00 00 00			C4h 9Ah 01h 06h		MWH[53]_TAR[1]	0.000	kWh	0	53	1
84 9B 01 06 00 00 00 00			84h 9Bh 01h 06h		MWH[54]_TAR[1]	0.000	kWh	0	54	1
C4 9B 01 06 00 00 00 00			C4h 9Bh 01h 06h		MWH[55]_TAR[1]	0.000	kWh	0	55	1
1F	Following Telegramms		1Fh		More 1					

REQ_UD2: 10 5B FE 79 16 **Following telegram 3 - Heating/Cooling Volume Mothly logger**

C5 Fertigungsversion

Raw data	Information	Format	Note
Header			
68 D6 D6 68	RSP_UD, length	68 LL LL 68	
08 00 72	C Field, Adress, CI Field	08 00 72	Primary 000
83 44 01 33	Serial number	SS SS SS SS	Sec. 33014483
49 6A	Manufacturer	ZRI	
88	Version	136	
0D	Medium	04 - Heat outlet	
		0C - Heat inlet	
		0D - Heat/Cool (Changover)	
		0B - Cooling outlet	
		0A - Cooling inlet	
52	Acces number		
00	Status		
0000	Signature		
Parameterlist	Long frame - See below		
59	Checksum	CS	
16	Stopbit	16	

Parameterlist

Data, long frame

Raw data	Information	Unit	DIF/VIF	Note	ZDF	Value	Einheit Relay	Value	SP-Nr.	Tarif
0C 78 83 44 01 33	Identification number		0Ch 78h		FAB	33104483				
84 80 01 13 00 00 00 00	H/C Volume Montly Logger last value (n)	L*10^-3 (Display 0.000L)	84h 80h 01h 13h		QM[32]	0.000	0	l	32	0
84 80 01 13 00 00 00 00	or	L (Display 0L)	84h 80h 01h 13h		QM[32]	0.0				
C4 80 01 13 FF FF FF FF	H/C Volume Montly Logger previous value (n-1)	L*10^-3 (Display 0.000L)	C4h 90h 01h 06h		QM[33]	0.000	-1	l	33	0
C4 80 01 13 FF FF FF FF	or	L (Display 0L)	C4h 90h 01h 06h		QM[33]	0.0				
84 81 01 13 FF FF FF FF	H/C Volume Monthly Logger previous value (n-2)	L*10^-3 (Display 0.000L)	84h 81h 01h 13h		QM[34]	0.000	-1	l	34	0
84 81 01 13 FF FF FF FF	or	L (Display 0L)	84h 81h 01h 13h		QM[34]	0.0				
C4 81 01 13 FF FF FF FF	Cooling Monthly Logger previous value (n-x), up to 24 Months	See units above	C4h 81h 01h 13h		QM[35]	0.000	-1	l	35	0
84 82 01 13 FF FF FF FF			84h 82h 01h 13h		QM[36]	0.000	-1	l	36	0
C4 82 01 13 FF FF FF FF			C4h 82h 01h 13h		QM[37]	0.000	-1	l	37	0
84 83 01 13 FF FF FF FF			84h 83h 01h 13h		QM[38]	0.000	-1	l	38	0
C4 83 01 13 00 00 00 00			C4h 83h 01h 13h		QM[39]	0.000	0	l	39	0
84 84 01 13 00 00 00 00			84h 84h 01h 13h		QM[40]	0.000	0	l	40	0
C4 84 01 13 00 00 00 00			C4h 84h 01h 13h		QM[41]	0.000	0	l	41	0
84 85 01 13 00 00 00 00			84h 85h 01h 13h		QM[42]	0.000	0	l	42	0
C4 85 01 13 00 00 00 00			C4h 85h 01h 13h		QM[43]	0.000	0	l	43	0
84 86 01 13 00 00 00 00			84h 86h 01h 13h		QM[44]	0.000	0	l	44	0
C4 86 01 13 00 00 00 00			C4h 86h 01h 13h		QM[45]	0.000	0	l	45	0
84 87 01 13 00 00 00 00			84h 87h 01h 13h		QM[46]	0.000	0	l	46	0
C4 87 01 13 00 00 00 00			C4h 87h 01h 13h		QM[47]	0.000	0	l	47	0
84 88 01 13 00 00 00 00			84h 88h 01h 13h		QM[48]	0.000	0	l	48	0
C4 88 01 13 00 00 00 00			C4h 88h 01h 13h		QM[49]	0.000	0	l	49	0
84 89 01 13 00 00 00 00			84h 89h 01h 13h		QM[50]	0.000	0	l	50	0
C4 89 01 13 00 00 00 00			C4h 89h 01h 13h		QM[51]	0.000	0	l	51	0
84 8A 01 13 00 00 00 00			84h 8Ah 01h 13h		QM[52]	0.000	0	l	52	0
C4 8A 01 13 00 00 00 00			C4h 8Ah 01h 13h		QM[53]	0.000	0	l	53	0
84 8B 01 13 00 00 00 00			84h 8Bh 01h 13h		QM[54]	0.000	0	l	54	0
C4 8B 01 13 00 00 00 00			C4h 8Bh 01h 13h		QM[55]	0.000	0	l	55	0
1F	Following Telegramms		1Fh		More 1					

REQ_UD2: 10 7B FE 79 16 **Following telegram 4 - Time point storage Monthly logger Heating energy**

C5 Fertigungsversion

Raw data	Information	Format	Note
Header			
68 A6 A6 68	RSP_UD, length	68 LL LL 68	
08 00 72	C Field, Adress, CI Field	08 00 72	Primary 000
83 44 01 33	Serial number	SS SS SS SS	Sec. 33014483
49 6A	Manufacturer	ZRI	
88	Version	136	
0D	Medium	04 - Heat outlet	
		0C - Heat inlet	
		0D - Heat/Cool (Changover)	
		0B - Cooling outlet	
		0A - Cooling inlet	
53	Acces number		
00	Status		
0000	Signature		
Parameterlist	Long frame - See below		
66	Checksum	CS	
16	Stopbit	16	

Parameterlist

Data, long frame

Raw data	Information	Unit	DIF/VIF	Note	ZDF	Value	Einheit Relay	Value	SP-Nr.	Tarif
0C 78 83 44 01 33	Identification number		0Ch 78h		FAB	33104483				
82 80 01 6C A1 18	Time point storage Monthly Logger for Heating energy	dd.mm.yy	82h 80h 01h 6Ch		TIMP[32]	01.08.2013				
C2 80 01 6C A1 17			C2h 80h 01h 6Ch		TIMP[33]	01.07.2013				
82 81 01 6C A1 16			82h 81h 01h 6Ch		TIMP[34]	01.06.2013				
C2 81 01 6C A1 15			C2h 81h 01h 6Ch		TIMP[35]	01.05.2013				
82 82 01 6C A1 14			82h 82h 01h 6Ch		TIMP[36]	01.04.2013				
C2 82 01 6C A1 13			C2h 82h 01h 6Ch		TIMP[37]	01.03.2013				
82 83 01 6C A1 12			82h 83h 01h 6Ch		TIMP[38]	01.02.2013				
C2 83 01 6C A1 11			C2h 83h 01h 6Ch		TIMP[39]	01.01.2013				
82 84 01 6C 01 A1			82h 84h 01h 6Ch		TIMP[40]	01.01.1980				
C2 84 01 6C 01 A1			C2h 84h 01h 6Ch		TIMP[41]	01.01.1980				
82 85 01 6C 01 A1			82h 85h 01h 6Ch		TIMP[42]	01.01.1980				
C2 85 01 6C 01 A1			C2h 85h 01h 6Ch		TIMP[43]	01.01.1980				
82 86 01 6C 01 A1			82h 86h 01h 6Ch		TIMP[44]	01.01.1980				
C2 86 01 6C 01 A1			C2h 86h 01h 6Ch		TIMP[45]	01.01.1980				
82 87 01 6C 01 A1			82h 87h 01h 6Ch		TIMP[46]	01.01.1980				
C2 87 01 6C 01 A1			C2h 87h 01h 6Ch		TIMP[47]	01.01.1980				
82 88 01 6C 01 A1			82h 88h 01h 6Ch		TIMP[48]	01.01.1980				
C2 88 01 6C 01 A1			C2h 88h 01h 6Ch		TIMP[49]	01.01.1980				
82 89 01 6C 01 A1			82h 89h 01h 6Ch		TIMP[50]	01.01.1980				
C2 89 01 6C 01 A1			C2h 89h 01h 6Ch		TIMP[51]	01.01.1980				
82 8A 01 6C 01 A1			82h 8Ah 01h 6Ch		TIMP[52]	01.01.1980				
C2 8A 01 6C 01 A1			C2h 8Ah 01h 6Ch		TIMP[53]	01.01.1980				
82 8B 01 6C 01 A1			82h 8Bh 01h 6Ch		TIMP[54]	01.01.1980				
C2 8B 01 6C 01 A1			C2h 8Bh 01h 6Ch		TIMP[55]	01.01.1980				
1F	Following Telegramms		1Fh		More 1					

REQ_UD2: 10 5B FE 79 16 **Following telegram 5 - Time point storage Monthly logger Cooling energy**

C5 Fertigungsversion

Raw data	Information	Format	Note
Header			
68 A5 A5 68	RSP_UD, length	68 LL LL 68	
08 00 72	C Field, Adress, CI Field	08 00 72	Primary 000
83 44 01 33	Serial number	SS SS SS SS	Sec. 33014483
49 6A	Manufacturer	ZRI	
88	Version	136	
0D	Medium	04 - Heat outlet	
		0C - Heat inlet	
		0D - Heat/Cool (Changover)	
		0B - Cooling outlet	
		0A - Cooling inlet	
54	Acces number		
00	Status		
0000	Signature		
Parameterlist	Long frame - See below		
C8	Checksum	CS	
16	Stopbit	16	

Parameterlist

Data, long frame

Raw data	Information	Unit	DIF/VIF	Note	ZDF	Value	Einheit Relay	Value	SP-Nr.	Tarif
0C 78 83 44 01 33	Identification number		0Ch 78h		FAB	33104483				
82 90 01 6C A1 18	Time point storage Monthly Logger for Cooling energy	dd.mm.yy	82h 90h 01h 6Ch		TIMP[32]_TAR[1]	01.08.2013				
C2 90 01 6C A1 17			C2h 90h 01h 6Ch		TIMP[33]_TAR[1]	01.07.2013				
82 91 01 6C A1 16			82h 91h 01h 6Ch		TIMP[34]_TAR[1]	01.06.2013				
C2 91 01 6C A1 15			C2h 91h 01h 6Ch		TIMP[35]_TAR[1]	01.05.2013				
82 92 01 6C A1 14			82h 92h 01h 6Ch		TIMP[36]_TAR[1]	01.04.2013				
C2 92 01 6C A1 13			C2h 92h 01h 6Ch		TIMP[37]_TAR[1]	01.03.2013				
82 93 01 6C A1 12			82h 93h 01h 6Ch		TIMP[38]_TAR[1]	01.02.2013				
C2 93 01 6C A1 11			C2h 93h 01h 6Ch		TIMP[39]_TAR[1]	01.01.2013				
82 94 01 6C 01 A1			82h 94h 01h 6Ch		TIMP[40]_TAR[1]	01.01.1980				
C2 94 01 6C 01 A1			C2h 94h 01h 6Ch		TIMP[41]_TAR[1]	01.01.1980				
82 95 01 6C 01 A1			82h 95h 01h 6Ch		TIMP[42]_TAR[1]	01.01.1980				
C2 95 01 6C 01 A1			C2h 95h 01h 6Ch		TIMP[43]_TAR[1]	01.01.1980				
82 96 01 6C 01 A1			82h 96h 01h 6Ch		TIMP[44]_TAR[1]	01.01.1980				
C2 96 01 6C 01 A1			C2h 96h 01h 6Ch		TIMP[45]_TAR[1]	01.01.1980				
82 97 01 6C 01 A1			82h 97h 01h 6Ch		TIMP[46]_TAR[1]	01.01.1980				
C2 97 01 6C 01 A1			C2h 97h 01h 6Ch		TIMP[47]_TAR[1]	01.01.1980				
82 98 01 6C 01 A1			82h 98h 01h 6Ch		TIMP[48]_TAR[1]	01.01.1980				
C2 98 01 6C 01 A1			C2h 98h 01h 6Ch		TIMP[49]_TAR[1]	01.01.1980				
82 99 01 6C 01 A1			82h 99h 01h 6Ch		TIMP[50]_TAR[1]	01.01.1980				
C2 99 01 6C 01 A1			C2h 99h 01h 6Ch		TIMP[51]_TAR[1]	01.01.1980				
82 9A 01 6C 01 A1			82h 9Ah 01h 6Ch		TIMP[52]_TAR[1]	01.01.1980				
C2 9A 01 6C 01 A1			C2h 9Ah 01h 6Ch		TIMP[53]_TAR[1]	01.01.1980				
82 9B 01 6C 01 A1			82h 9Bh 01h 6Ch		TIMP[54]_TAR[1]	01.01.1980				
C2 9B 01 6C 01 A1			C2h 9Bh 01h 6Ch		TIMP[55]_TAR[1]	01.01.1980				