Manual EMU Professional II M-Bus

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Version	Revision Date	Token	Changes
V1.0	05.07.2021	met,fme	Creation of document
V1.1	07.12.2021	fme	Corrected M-Bus data logger answer (status byte VIFE)
V1.3	17.02.2022	met	Added missing M-Bus telegrams
V1.4	06.04.2022	met	Added information to data logger read-out
V1.5	05.05.2022	met	Additional info about time synchronization
V1.6	11.05.2022	met	Rework of Doc.Ref numbers. Same document in different language no longer has a different Doc.Ref number
V2.0	30.11.2022	met	Rework document structure
V2.1	26.06.2023	met	Switch between 32bit and 64bit register values
V2.2	10.06.2024	met	New M-Bus telegrams. Tariff change, LCD blinker
V2.3	07.11.2024	met	Baud rate change over M-bus telegram detailed
V2.4	23.07.2025	met	Baud rate settings corrected
V2.5	07.05.2026	met	Datalogger via primary and single phase telegram added.

General

The M-Bus interface is implemented according to EN 13757-2,-3 (formerly EN1434-3). Therefore, the EMU Professional II M-Bus can communicate with all M-Bus capable devices. The M-Bus interface is integrated into the meter and protected from contamination and manipulation. The interface is located at the back of the meter on pin 1[3] (+) and pin 2[4] (-).

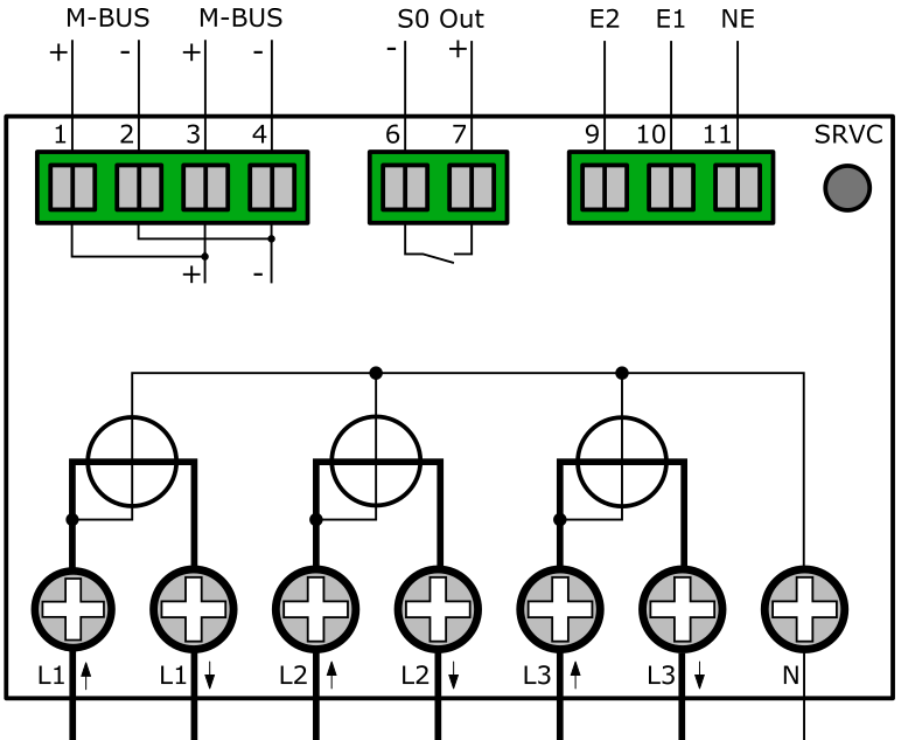
Settings ex-Factory

Setting	Value
Secondary Address	Serial number of the device
Primary Address	0
Baud rate	2400

Connection Diagram M-Bus

The EMU Professional II M-Bus possesses two internally connected M-Bus clamps. This facilitates an easier serial connection of multiple M-Bus devices in installations.

Note: The M-Bus interface is the same for the EMU Professional II 3/100 M-Bus and the EMU Professional II 3/5 M-Bus.



Configuration of the Primary Address on the Device

- “Arrow right” to settings
- “Arrow down” to M-Bus Pri. Address
- Press “SRVC” button (<2 seconds)
- “Arrow right” chooses the digit, “Arrow down” increments the digit
- Save: Press “SRVC” button (>2 seconds) until the LCD flashes

Configuration of the Secondary Address on the Device

- “Arrow right” to settings
- “Arrow down” to M-Bus Sec. Address
- Press “SRVC” button (<2 seconds)
- “Arrow right” chooses the digit, “Arrow down” increments the digit
- Save: Press “SRVC” button (>2 seconds) until the LCD flashes

Configuration of the Baud Rate on the Device

- “Arrow right” to settings
- “Arrow down” to M-Bus Baud Rate
- Press “SRVC” button (<2 seconds)
- “Arrow right” chooses between 300, 1’200, 2’400 (default), 4’800 and 9’600 Baud
- Save: Press “SRVC” button (>2 seconds) until the LCD flashes

Configuration via MB-Connect

The EMU Professional II M-Bus can also be configured over M-Bus with our own software MB-Connect.

Download the MB-Connect software HERE and start it up. Enter the following in the configuration window that pops up:

Note: In case this window does not open automatically you can open it manually by clicking on “Configuration” in the top menu.

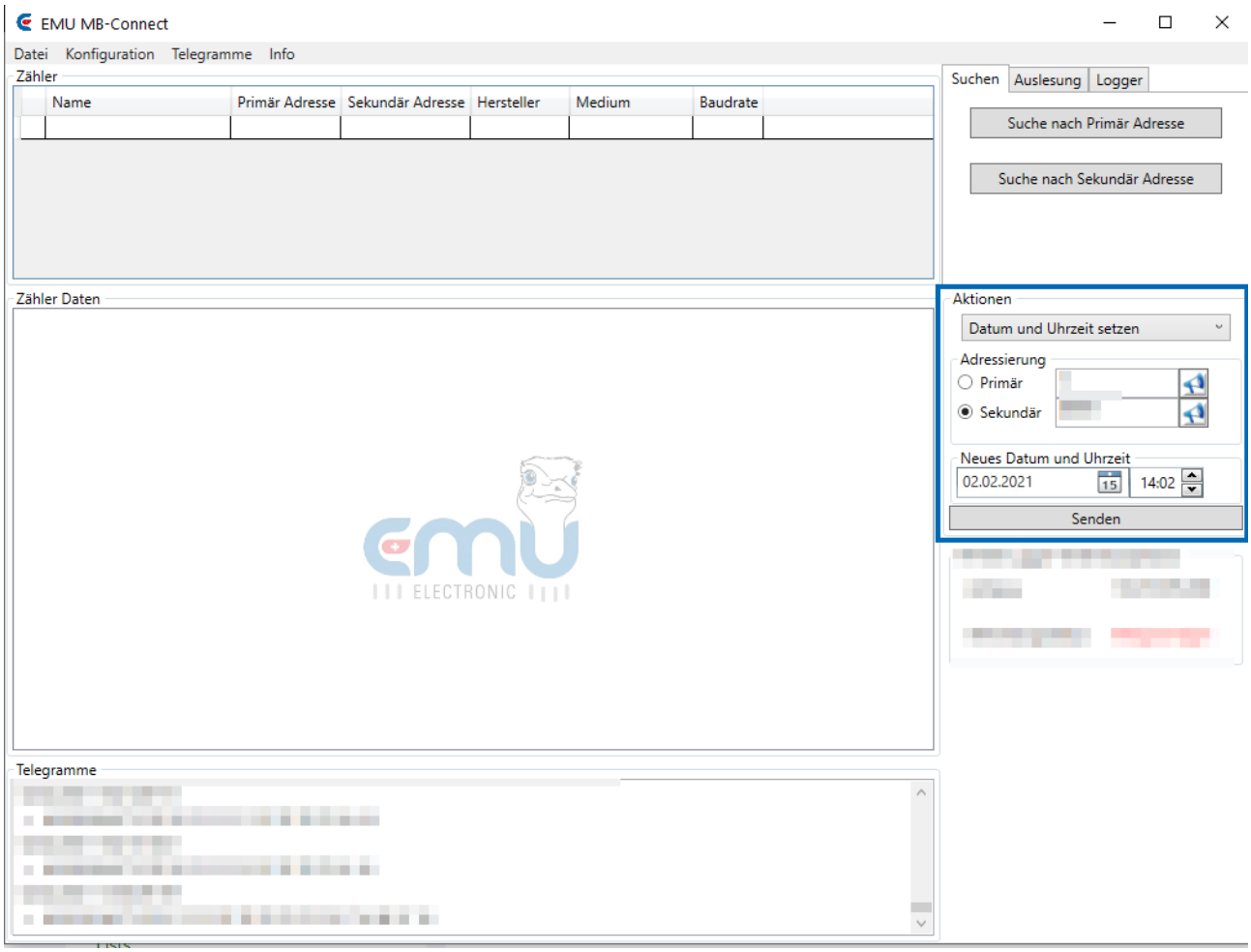
- “Communication mode”:
  - COM Port: Connect to the EMU Professional II via the COM-Port of your M-Bus level converter.
    - Choose which port you use.
    - Choose your desired baud rate.
    - If you initialize this EMU Professional II for the first time, be sure to also check the last option “Initialize Device Prior to Read-Out (SND NKE)”.
    - Click “Save” and you should be connected to the meter.

Once you are connected to the EMU Professional II you can send commands via the action menu on the right.

- New Primary Address: Choose this option and set your desired address in the field “New Primary Address”.
  - “Save” this setting by clicking “Send” and delivering this information to the EMU Professional II .
- New Secondary Address: Choose this option and set your desired address in the field “New Secondary Address”.
  - “Save” this setting by clicking “Send” and delivering this information to the EMU Professional II .
- New Baud Rate: Choose this option and set your desired address in the field “New Baud Rate”.
  - “Save” this setting by clicking “Send” and delivering this information to the EMU Professional II .

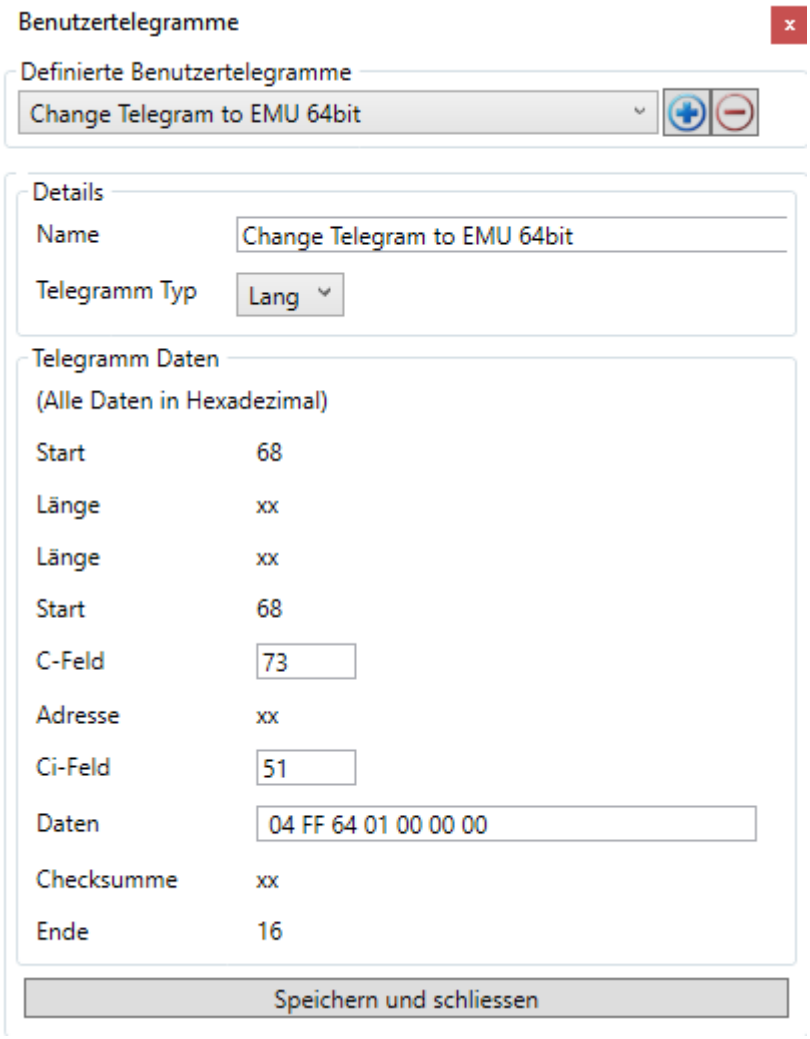
Note: After changing the baud rate via M-Bus, the meter must be read out with the new baud rate within 30 seconds, otherwise it will revert to the old baud rate.

- New Date/Time: Choose this option and set your desired address in the field “New Date/Time”.
  - “Save” this setting by clicking “Send” and delivering this information to the EMU Professional II .


EMU MB-Connect
Datei
Konfiguration
Telegramme
Info
Zähler
Name
Primär Adresse
Sekundär Adresse
Hersteller
Medium
Baudrate
Suchen
Auslesung
Logger
Suche nach Primär Adresse
Suche nach Sekundär Adresse
Zähler Daten
Aktionen
Datum und Uhrzeit setzen
Adressierung
Primär
Sekundär
Neues Datum und Uhrzeit
02.02.2021
14:02
Senden
Telegramme

Example Telegram on MB-Connect

The following image shows how you set up the telegram for changing to the 64bit register readout. The primary or secondary address must not be added in the data field.



For further information on the MB-Connect software please consult its documentation.

Data Available for Read-Out

You can read out all registers of the EMU Professional II via M-Bus. The following chapters describe the M-Bus telegrams.

Standard Energy Register Readout 32bit

Byte Nr.	Size	Value	Description	Meaning
1	1	0x68	START char LONG telegram	
2	1	0xBC	L-Field	
3	1	0xBC	L-Field repeated	
4	1	0x68	START char LONG telegram repeated	
5	1	0x08	C-Field	
6	1	0x00	A-Field primary address	
7	1	0x72	CI-Field 12 Byte header & variable format data	
8	4	…	Secondary address	
12	2	0x15	0xB5	Manufacturer Code EMU 14
15	1	0x02	Medium Electricity	
16	1	0xXX	Access Number	
17	1	0xXX	Status Byte	
18	2	0x00 0x00	Signature No Encryption	
20	1	0x84	DIF-Field 32 bit unsigned integer	Active Energy Import T1
21	1	0x10	DIFE-Field Tariff/Unit information	
22	1	0x03	VIF-Field Energy Wh	
23	4	…	Energy	
27	1	0x84	DIF-Field 32 bit unsigned integer	Active Energy Import T2
28	1	0x20	DIFE-Field Tariff/Unit information	
29	1	0x03	VIF-Field Energy Wh	
30	4	…	Energy	
34	1	0x84	DIF-Field 32 bit unsigned integer	Active Energy Export T1
35	1	0x10	DIFE-Field Tariff/Unit information	
36	1	0x03	VIF-Field Energy Wh	
37	4	…	Energy	
41	1	0x84	DIF-Field 32 bit unsigned integer	Active Energy Export T2
42	1	0x20	DIFE-Field Tariff/Unit information	
43	1	0x03	VIF-Field Energy Wh	
44	4	…	Energy	
48	1	0x84	DIF-Field 32 bit unsigned integer	Reactive Energy Import T1
49	1	0x90	DIFE-Field Tariff/Unit information	
50	1	0x40	DIFE-Field Tariff/Unit information	
51	1	0x03	VIF-Field Energy varh	
52	4	…	Energy	
56	1	0x84	DIF-Field 32 bit unsigned integer	Reactive Energy Import T2
57	1	0xA0	DIFE-Field Tariff/Unit information	
58	1	0x40	DIFE-Field Tariff/Unit information	
59	1	0x03	VIF-Field Energy varh	
60	4	…	Energy	
64	1	0x84	DIF-Field 32 bit unsigned integer	Reactive Energy Export T1
65	1	0x90	DIFE-Field Tariff/Unit information	
66	1	0x40	DIFE-Field Tariff/Unit information	
67	1	0x03	VIF-Field Energy varh	
68	4	…	Energy	
72	1	0x84	DIF-Field 32 bit unsigned integer	Reactive Energy Export T2
73	1	0xA0	DIFE-Field Tariff/Unit information	
74	1	0x40	DIFE-Field Tariff/Unit information	
75	1	0x03	VIF-Field Energy varh	

Byte Nr.	Size	Value	Description	Meaning
76	4	…	Energy	
80	1	0x04	DIF-Field 32 bit signed integer	Active Power L123
81	1	0x2B	VIF-Field Power W	
82	4	…	Power	
86	1	0x04	DIF-Field 32 bit signed integer	Active Power L1
87	1	0xAB	VIF-Field Power W	
88	1	0xFF	VIFE-Field Manufacturer specific	
89	1	0x01	VIFE-Field Phase L1	
90	4	…	Power	
94	1	0x04	DIF-Field 32 bit signed integer	Active Power L2
95	1	0xAB	VIF-Field Power W	
96	1	0xFF	VIFE-Field Manufacturer specific	
97	1	0x02	VIFE-Field Phase L2	
98	4	…	Power	
102	1	0x04	DIF-Field 32 bit signed integer	Active Power L3
103	1	0xAB	VIF-Field Power W	
104	1	0xFF	VIFE-Field Manufacturer specific	
105	1	0x03	VIFE-Field Phase L3	
106	4	…	Power	
110	1	0x04	DIF-Field 32 bit signed integer	Current L123
111	1	0xFD	VIF-Field Secondary VIF table	
112	1	0x59	VIFE-Field Current 0.001A	
113	4	…	Current	
117	1	0x04	DIF-Field 32 bit signed integer	Current L1
118	1	0xFD	VIF-Field Secondary VIF table	
119	1	0xD9	VIFE-Field Current 0.001A	
120	1	0xFF	VIFE-Field Manufacturer specific	
121	1	0x01	VIFE-Field Phase L1	
122	4	…	Current	
126	1	0x04	DIF-Field 32 bit signed integer	Current L2
127	1	0xFD	VIF-Field Extended VIF table	
128	1	0xD9	VIFE-Field Current 0.001A	
129	1	0xFF	VIFE-Field Manufacturer specific	
130	1	0x02	VIFE-Field Phase L2	
131	4	…	Current	
135	1	0x04	DIF-Field 32 bit signed integer	Current L3
136	1	0xFD	VIF-Field Extended VIF table	
137	1	0xD9	VIFE-Field Current 0.001A	
138	1	0xFF	VIFE-Field Manufacturer specific	
139	1	0x03	VIFE-Field Phase L3	
140	4	…	Current	
144	1	0x02	DIF-Field 16 bit signed integer	Voltage L1-N
145	1	0xFD	VIF-Field Extended VIF table	
146	1	0xC8	VIFE-Field Voltage 0.1V	
147	1	0xFF	VIFE-Field Manufacturer specific	
148	1	0x01	VIFE-Field Phase L1	
149	2	…	Voltage	
151	1	0x02	DIF-Field 16 bit signed integer	Voltage L2-N
152	1	0xFD	VIF-Field Extended VIF table	
153	1	0xC8	VIFE-Field Voltage 0.1V	
154	1	0xFF	VIFE-Field Manufacturer specific	
155	1	0x02	VIFE-Field Phase L2	
156	2	…	Voltage	
158	1	0x02	DIF-Field 16 bit signed integer	Voltage L3-N
159	1	0xFD	VIF-Field Extended VIF table	
160	1	0xC8	VIFE-Field Voltage 0.1V	
161	1	0xFF	VIFE-Field Manufacturer specific	
162	1	0x03	VIFE-Field Phase L3	

Byte Nr.	Size	Value	Description	Meaning
163	2	…	Voltage	
165	1	0x01	DIF-Field 8 bit signed integer	Power factor L1
166	1	0xFF	VIFE-Field Manufacturer specific	
167	1	0xE1	VIFE-Field Power factor	
168	1	0xFF	VIFE-Field Manufacturer specific	
169	1	0x01	VIFE-Field Phase L1	
170	1	…	Powerfactor	
171	1	0x01	DIF-Field 8 bit signed integer	Power factor L2
172	1	0xFF	VIFE-Field Manufacturer specific	
173	1	0xE1	VIFE-Field Power factor	
174	1	0xFF	VIFE-Field Manufacturer specific	
175	1	0x02	VIFE-Field Phase L2	
176	1	…	Powerfactor	
177	1	0x01	DIF-Field 8 bit signed integer	Power factor L3
178	1	0xFF	VIFE-Field Manufacturer specific	
179	1	0xE1	VIFE-Field Power factor	
180	1	0xFF	VIFE-Field Manufacturer specific	
181	1	0x03	VIFE-Field Phase L3	
182	1	…	Powerfactor	
183	1	0x02	DIF-Field 16 bit signed integer	Net Frequency L123
184	1	0xFF	VIF-Field Manufacturer specific	
185	1	0x52	VIFE-Field Net Frequency 0.1Hz	
186	2	…	Net Frequency	
188	1	0x02	DIF-Field 16 bit signed integer	Power fail Count
189	1	0xFD	VIF-Field Extended VIF table	
190	1	0x60	VIFE-Field Power fail (Reset) counter	
191	2	…	Power fail Count	
193	1	0xXX	CS	
194	1	0x16	STOP char	

Standard Energy Register Readout 64bit

Byte Nr.	Size	Value	Description	Meaning
1	1	0x68	START char LONG telegram	
2	1	0xDC	L-Field	
3	1	0xDC	L-Field repeated	
4	1	0x68	START char LONG telegram repeated	
5	1	0x08	C-Field	
6	1	0x00	A-Field primary address	
7	1	0x72	CI-Field 12 Byte header followed by variable format data	
8	4	…	Secondary address	
12	2	0x15 0xB5	Manufacturer Code EMU	
14	1	0x19	Meter version 25	
15	1	0x02	Medium Electricity	
16	1	0xXX	Access Number	
17	1	0xXX	Status Byte	
18	2	0x00 0x00	Signature No Encryption	
20	1	0x87	DIF-Field 64 bit unsigned integer	Active Energy Import T1
21	1	0x10	DIFE-Field Tariff/Unit information	
22	1	0x03	VIF-Field Energy Wh	
23	8	…	Energy	
31	1	0x87	DIF-Field 64 bit unsigned integer	Active Energy Import T2
32	1	0x20	DIFE-Field Tariff/Unit information	
33	1	0x03	VIF-Field Energy Wh	

Byte Nr.	Size	Value	Description	Meaning
34	8	…	Energy	
42	1	0x87	DIF-Field 64 bit unsigned integer	Active Energy Export T1
43	1	0x10	DIFE-Field Tariff/Unit information	
44	1	0x03	VIF-Field Energy Wh	
45	8	…	Energy	
53	1	0x87	DIF-Field 64 bit unsigned integer	Active Energy Export T2
54	1	0x20	DIFE-Field Tariff/Unit information	
55	1	0x03	VIF-Field Energy Wh	
56	8	…	Energy	
64	1	0x87	DIF-Field 64 bit unsigned integer	Reactive Energy Import T1
65	1	0x90	DIFE-Field Tariff/Unit information	
66	1	0x40	DIFE-Field Tariff/Unit information	
67	1	0x03	VIF-Field Energy varh	
68	8	…	Energy	
76	1	0x87	DIF-Field 64 bit unsigned integer	Reactive Energy Import T2
77	1	0xA0	DIFE-Field Tariff/Unit information	
78	1	0x40	DIFE-Field Tariff/Unit information	
79	1	0x03	VIF-Field Energy varh	
80	8	…	Energy	
88	1	0x87	DIF-Field 64 bit unsigned integer	Reactive Energy Export T1
89	1	0x90	DIFE-Field Tariff/Unit information	
90	1	0x40	DIFE-Field Tariff/Unit information	
91	1	0x03	VIF-Field Energy varh	
92	8	…	Energy	
100	1	0x87	DIF-Field 64 bit unsigned integer	Reactive Energy Export T2
101	1	0xA0	DIFE-Field Tariff/Unit information	
102	1	0x40	DIFE-Field Tariff/Unit information	
103	1	0x03	VIF-Field Energy varh	
104	8	…	Energy	
112	1	0x04	DIF-Field 32 bit signed integer	Active Power L123
113	1	0x2B	VIF-Field Power W	
114	4	…	Power	
118	1	0x04	DIF-Field 32 bit signed integer	Active Power L1
119	1	0xAB	VIF-Field Power W	
120	1	0xFF	VIFE-Field Manufacturer specific	
121	1	0x01	VIFE-Field Phase L1	
122	4	…	Power	
126	1	0x04	DIF-Field 32 bit signed integer	Active Power L2
127	1	0xAB	VIF-Field Power W	
128	1	0xFF	VIFE-Field Manufacturer specific	
129	1	0x02	VIFE-Field Phase L2	
130	4	…	Power	
134	1	0x04	DIF-Field 32 bit signed integer	Active Power L3
135	1	0xAB	VIF-Field Power W	
136	1	0xFF	VIFE-Field Manufacturer specific	
137	1	0x03	VIFE-Field Phase L3	
138	4	…	Power	
142	1	0x04	DIF-Field 32 bit signed integer	Current L123
143	1	0xFD	VIF-Field Secondary VIF table	
144	1	0x59	VIFE-Field Current 0.001A	
145	4	…	Current	
149	1	0x04	DIF-Field 32 bit signed integer	Current L1
150	1	0xFD	VIF-Field Secondary VIF table	
151	1	0xD9	VIFE-Field Current 0.001A	
152	1	0xFF	VIFE-Field Manufacturer specific	
153	1	0x01	VIFE-Field Phase L1	
154	4	…	Current	
158	1	0x04	DIF-Field 32 bit signed integer	Current L2

Byte Nr.	Size	Value	Description	Meaning
159	1	0xFD	VIF-Field Extended VIF table	
160	1	0xD9	VIFE-Field Current 0.001A	
161	1	0xFF	VIFE-Field Manufacturer specific	
162	1	0x02	VIFE-Field Phase L2	
163	4	…	Current	
167	1	0x04	DIF-Field 32 bit signed integer	Current L3
168	1	0xFD	VIF-Field Extended VIF table	
169	1	0xD9	VIFE-Field Current 0.001A	
170	1	0xFF	VIFE-Field Manufacturer specific	
171	1	0x03	VIFE-Field Phase L3	
172	4	…	Current	
176	1	0x02	DIF-Field 16 bit signed integer	Voltage L1-N
177	1	0xFD	VIF-Field Extended VIF table	
178	1	0xC8	VIFE-Field Voltage 0.1V	
179	1	0xFF	VIFE-Field Manufacturer specific	
180	1	0x01	VIFE-Field Phase L1	
181	2	…	Voltage	
183	1	0x02	DIF-Field 16 bit signed integer	Voltage L2-N
184	1	0xFD	VIF-Field Extended VIF table	
185	1	0xC8	VIFE-Field Voltage 0.1V	
186	1	0xFF	VIFE-Field Manufacturer specific	
187	1	0x02	VIFE-Field Phase L2	
188	2	…	Voltage	
190	1	0x02	DIF-Field 16 bit signed integer	Voltage L3-N
191	1	0xFD	VIF-Field Extended VIF table	
192	1	0xC8	VIFE-Field Voltage 0.1V	
193	1	0xFF	VIFE-Field Manufacturer specific	
194	1	0x03	VIFE-Field Phase L3	
195	2	…	Voltage	
197	1	0x01	DIF-Field 8 bit signed integer	Power factor L1
198	1	0xFF	VIFE-Field Manufacturer specific	
199	1	0xE1	VIFE-Field Powerfactor	
200	1	0xFF	VIFE-Field Manufacturer specific	
201	1	0x01	VIFE-Field Phase L1	
202	1	…	Powerfactor	
203	1	0x01	DIF-Field 8 bit signed integer	Power factor L2
204	1	0xFF	VIFE-Field Manufacturer specific	
205	1	0xE1	VIFE-Field Powerfactor	
206	1	0xFF	VIFE-Field Manufacturer specific	
207	1	0x02	VIFE-Field Phase L2	
208	1	…	Powerfactor	
209	1	0x01	DIF-Field 8 bit signed integer	Power factor L3
210	1	0xFF	VIFE-Field Manufacturer specific	
211	1	0xE1	VIFE-Field Powerfactor	
212	1	0xFF	VIFE-Field Manufacturer specific	
213	1	0x03	VIFE-Field Phase L3	
214	1	…	Powerfactor	
215	1	0x02	DIF-Field 16 bit signed integer	Net Frequency L123
216	1	0xFF	VIF-Field Manufacturer specific	
217	1	0x52	VIFE-Field Net Frequency 0.1Hz	
218	2	…	Net Frequency	
220	1	0x02	DIF-Field 16 bit signed integer	Power fail Count
221	1	0xFD	VIF-Field Extended VIF table	
222	1	0x60	VIFE-Field Powerfail (Reset) counter	
223	2	…	Powerfail Count	
225	1	0xX	CS	
226	1	0x16	STOP char	

Standard Single-phase Register Readout 32Bit

Byte Nr.	Size	Value	Description	Meaning
1	1	0x68	START char LONG telegram	
2	1	0xE5	L-Field	
3	1	0xE5	L-Field repeated	
4	1	0x68	START char LONG telegram repeated	
5	1	0x08	C-Field	
6	1	0x00	A-Field primary address	
7	1	0x72	CI-Field 12 Byte header followed by variable format data	
8	4	…	Secondary address	
12	2	0x15 0xB5	Manufacturer Code EMU	
14	1	0x19	Meter version 25	
15	1	0x02	Medium Electricity	
16	1	0xXX	Access Number	
17	1	0xXX	Status Byte	
18	2	0x00 0x00	Signature No Encryption	
20	1	0x04	DIF-Field 32 bit unsigned integer	Active Energy Import L1
21	1	0x83	VIF-Field Energy Wh	
22	1	0xFF	VIFE-Field Manufacturer specific	
23	1	0x01	VIFE-Field Phase L1	
24	4	…	Energy	
28	1	0x04	DIF-Field 32 bit unsigned integer	Active Energy Import L2
29	1	0x83	VIF-Field Energy Wh	
30	1	0xFF	VIFE-Field Manufacturer specific	
31	1	0x02	VIFE-Field Phase L2	
32	4	…	Energy	
36	1	0x04	DIF-Field 32 bit unsigned integer	Active Energy Import L3
37	1	0x83	VIF-Field Energy Wh	
38	1	0xFF	VIFE-Field Manufacturer specific	
39	1	0x03	VIFE-Field Phase L3	
40	4	…	Energy	
44	1	0x04	DIF-Field 32 bit unsigned integer	Active Energy Export L1
45	1	0x83	VIF-Field Energy Wh	
46	1	0xFF	VIFE-Field Manufacturer specific	
47	1	0x01	VIFE-Field Phase L1	
48	4	…	Energy	
52	1	0x04	DIF-Field 32 bit unsigned integer	Active Energy Export L2
53	1	0x83	VIF-Field Energy Wh	
54	1	0xFF	VIFE-Field Manufacturer specific	
55	1	0x02	VIFE-Field Phase L2	
56	4	…	Energy	
60	1	0x04	DIF-Field 32 bit unsigned integer	Active Energy Export L3
61	1	0x83	VIF-Field Energy Wh	
62	1	0xFF	VIFE-Field Manufacturer specific	
63	1	0x03	VIFE-Field Phase L3	
64	4	…	Energy	
68	1	0x84	DIF-Field 32 bit unsigned integer	Reactive Energy Import L1
69	1	0x80	DIFE-Field Tariff/Unit information	
70	1	0x40	DIFE-Field Tariff/Unit information	
71	1	0x83	VIF-Field Energy varh	
72	1	0xFF	VIFE-Field Manufacturer specific	
73	1	0x01	VIFE-Field Phase L1	
74	4	…	Energy	
78	1	0x84	DIF-Field 32 bit unsigned integer	Reactive Energy Import L2
79	1	0xA0	DIFE-Field Tariff/Unit information	
80	1	0x40	DIFE-Field Tariff/Unit information	

Byte Nr.	Size	Value	Description	Meaning
81	1	0x83	VIF-Field Energy varh	
82	1	0xFF	VIFE-Field Manufacturer specific	
83	1	0x02	VIFE-Field Phase L2	
84	4	…	Energy	
88	1	0x84	DIF-Field 32 bit unsigned integer	Reactive Energy Import L3
89	1	0x80	DIFE-Field Tariff/Unit information	
90	1	0x40	DIFE-Field Tariff/Unit information	
91	1	0x83	VIF-Field Energy varh	
92	1	0xFF	VIFE-Field Manufacturer specific	
93	1	0x03	VIFE-Field Phase L3	
94	4	…	Energy	
98	1	0x84	DIF-Field 32 bit unsigned integer	Reactive Energy Export L1
99	1	0xA0	DIFE-Field Tariff/Unit information	
100	1	0x40	DIFE-Field Tariff/Unit information	
101	1	0x83	VIF-Field Energy varh	
102	1	0xFF	VIFE-Field Manufacturer specific	
103	1	0x01	VIFE-Field Phase L1	
104	4	…	Energy	
108	1	0x84	DIF-Field 32 bit unsigned integer	Reactive Energy Export L2
109	1	0x80	DIFE-Field Tariff/Unit information	
110	1	0x40	DIFE-Field Tariff/Unit information	
111	1	0x83	VIF-Field Energy varh	
112	1	0xFF	VIFE-Field Manufacturer specific	
113	1	0x02	VIFE-Field Phase L2	
114	4	…	Energy	
118	1	0x84	DIF-Field 32 bit unsigned integer	Reactive Energy Export L3
119	1	0xA0	DIFE-Field Tariff/Unit information	
120	1	0x40	DIFE-Field Tariff/Unit information	
121	1	0x83	VIF-Field Energy varh	
122	1	0xFF	VIFE-Field Manufacturer specific	
123	1	0x03	VIFE-Field Phase L3	
124	4	…	Energy	
128	1	0x04	DIF-Field 32 bit signed integer	Active Power L123
129	1	0x2B	VIF-Field Power W	
130	4	…	Power	
134	1	0x04	DIF-Field 32 bit signed integer	Active Power L1
135	1	0xAB	VIF-Field Power W	
136	1	0xFF	VIFE-Field Manufacturer specific	
137	1	0x01	VIFE-Field Phase L1	
138	4	…	Power	
142	1	0x04	DIF-Field 32 bit signed integer	Active Power L2
143	1	0xAB	VIF-Field Power W	
144	1	0xFF	VIFE-Field Manufacturer specific	
145	1	0x02	VIFE-Field Phase L2	
146	4	…	Power	
150	1	0x04	DIF-Field 32 bit signed integer	Active Power L3
151	1	0xAB	VIF-Field Power W	
152	1	0xFF	VIFE-Field Manufacturer specific	
153	1	0x03	VIFE-Field Phase L3	
154	4	…	Power	
158	1	0x04	DIF-Field 32 bit signed integer	Current L1
159	1	0xFD	VIF-Field Secondary VIF table	
160	1	0xD9	VIFE-Field Current 0.001A	
161	1	0xFF	VIFE-Field Manufacturer specific	
162	1	0x01	VIFE-Field Phase L1	
163	4	…	Current	
167	1	0x04	DIF-Field 32 bit signed integer	Current L2
168	1	0xFD	VIF-Field Extended VIF table	

Byte Nr.	Size	Value	Description	Meaning
169	1	0xD9	VIFE-Field Current 0.001A	
170	1	0xFF	VIFE-Field Manufacturer specific	
171	1	0x02	VIFE-Field Phase L2	
172	4	…	Current	
176	1	0x04	DIF-Field 32 bit signed integer	Current L3
177	1	0xFD	VIF-Field Extended VIF table	
178	1	0xD9	VIFE-Field Current 0.001A	
179	1	0xFF	VIFE-Field Manufacturer specific	
180	1	0x03	VIFE-Field Phase L3	
181	4	…	Current	
185	1	0x02	DIF-Field 16 bit signed integer	Voltage L1-N
186	1	0xFD	VIF-Field Extended VIF table	
187	1	0xC8	VIFE-Field Voltage 0.1V	
188	1	0xFF	VIFE-Field Manufacturer specific	
189	1	0x01	VIFE-Field Phase L1	
190	2	…	Voltage	
192	1	0x02	DIF-Field 16 bit signed integer	Voltage L2-N
193	1	0xFD	VIF-Field Extended VIF table	
194	1	0xC8	VIFE-Field Voltage 0.1V	
195	1	0xFF	VIFE-Field Manufacturer specific	
196	1	0x02	VIFE-Field Phase L2	
197	2	…	Voltage	
199	1	0x02	DIF-Field 16 bit signed integer	Voltage L3-N
200	1	0xFD	VIF-Field Extended VIF table	
201	1	0xC8	VIFE-Field Voltage 0.1V	
202	1	0xFF	VIFE-Field Manufacturer specific	
203	1	0x03	VIFE-Field Phase L3	
204	2	…	Voltage	
206	1	0x01	DIF-Field 8 bit signed integer	Power Factor L1
207	1	0xFF	VIFE-Field Manufacturer specific	
208	1	0xE1	VIFE-Field Powerfactor	
209	1	0xFF	VIFE-Field Manufacturer specific	
210	1	0x01	VIFE-Field Phase L1	
211	1	…	Powerfactor	
212	1	0x01	DIF-Field 8 bit signed integer	Power Factor L2
213	1	0xFF	VIFE-Field Manufacturer specific	
214	1	0xE1	VIFE-Field Powerfactor	
215	1	0xFF	VIFE-Field Manufacturer specific	
216	1	0x02	VIFE-Field Phase L2	
217	1	…	Powerfactor	
218	1	0x01	DIF-Field 8 bit signed integer	Power Factor L3
219	1	0xFF	VIFE-Field Manufacturer specific	
220	1	0xE1	VIFE-Field Powerfactor	
221	1	0xFF	VIFE-Field Manufacturer specific	
222	1	0x03	VIFE-Field Phase L3	
223	1	…	Powerfactor	
224	1	0x02	DIF-Field 16 bit signed integer	Frequency L123
225	1	0xFF	VIF-Field Manufacturer specific	
226	1	0x52	VIFE-Field Net Frequency 0.1Hz	
227	2	…	Net Frequency	
229	1	0x02	DIF-Field 16 bit signed integer	Power Fail Count
230	1	0xFD	VIF-Field Extended VIF table	
231	1	0x60	VIFE-Field Powerfail (Reset) counter	
232	2	…	Powerfail Count	
234	1	0xXX	CS	
235	1	0x16	STOP char	

Standard Single-phase Register Readout 64Bit

Byte Nr.	Size	Value	Description	Meaning
1	1	0x68	START char LONG telegram	
2	1	0xE8	L-Field	
3	1	0xE8	L-Field repeated	
4	1	0x68	START char LONG telegram repeated	
5	1	0x08	C-Field	
6	1	0x00	A-Field primary address	
7	1	0x72	CI-Field 12 Byte header followed by variable format data	
8	4	…	Secondary address	
12	2	0x15 0xB5	Manufacturer Code EMU	
14	1	0x19	Meter version 25	
15	1	0x02	Medium Electricity	
16	1	0xXX	Access Number	
17	1	0xXX	Status Byte	
18	2	0x00 0x00	Signature No Encryption	
20	1	0x07	DIF-Field 64 bit unsigned integer	Active Energy Import L1
21	1	0x83	VIF-Field Energy Wh	
22	1	0xFF	VIFE-Field Manufacturer specific	
23	1	0x01	VIFE-Field Phase L1	
24	8	…	Energy	
32	1	0x07	DIF-Field 64 bit unsigned integer	Active Energy Import L2
33	1	0x83	VIF-Field Energy Wh	
34	1	0xFF	VIFE-Field Manufacturer specific	
35	1	0x02	VIFE-Field Phase L2	
36	8	…	Energy	
44	1	0x07	DIF-Field 64 bit unsigned integer	Active Energy Import L3
45	1	0x83	VIF-Field Energy Wh	
46	1	0xFF	VIFE-Field Manufacturer specific	
47	1	0x03	VIFE-Field Phase L3	
48	8	…	Energy	
56	1	0x07	DIF-Field 64 bit unsigned integer	Active Energy Export L1
57	1	0x83	VIF-Field Energy Wh	
58	1	0xFF	VIFE-Field Manufacturer specific	
59	1	0x01	VIFE-Field Phase L1	
60	8	…	Energy	
68	1	0x07	DIF-Field 64 bit unsigned integer	Active Energy Export L2
69	1	0x83	VIF-Field Energy Wh	
70	1	0xFF	VIFE-Field Manufacturer specific	
71	1	0x02	VIFE-Field Phase L2	
72	8	…	Energy	
80	1	0x07	DIF-Field 64 bit unsigned integer	Active Energy Export L3
81	1	0x83	VIF-Field Energy Wh	
82	1	0xFF	VIFE-Field Manufacturer specific	
83	1	0x03	VIFE-Field Phase L3	
84	8	…	Energy	
92	1	0x87	DIF-Field 64 bit unsigned integer	Reactive Energy Import L1
93	1	0x80	DIFE-Field Tariff/Unit information	
94	1	0x40	DIFE-Field Tariff/Unit information	
95	1	0x83	VIF-Field Energy varh	
96	1	0xFF	VIFE-Field Manufacturer specific	
97	1	0x01	VIFE-Field Phase L1	
98	8	…	Energy	
106	1	0x87	DIF-Field 64 bit unsigned integer	Reactive Energy Import L2
107	1	0xA0	DIFE-Field Tariff/Unit information	
108	1	0x40	DIFE-Field Tariff/Unit information	

Byte Nr.	Size	Value	Description	Meaning
109	1	0x83	VIF-Field Energy varh	
110	1	0xFF	VIFE-Field Manufacturer specific	
111	1	0x02	VIFE-Field Phase L2	
112	8	…	Energy	
120	1	0x87	DIF-Field 64 bit unsigned integer	Reactive Energy Import L3
121	1	0x80	DIFE-Field Tariff/Unit information	
122	1	0x40	DIFE-Field Tariff/Unit information	
123	1	0x83	VIF-Field Energy varh	
124	1	0xFF	VIFE-Field Manufacturer specific	
125	1	0x03	VIFE-Field Phase L3	
126	8	…	Energy	
134	1	0x87	DIF-Field 64 bit unsigned integer	Reactive Energy Export L1
135	1	0xA0	DIFE-Field Tariff/Unit information	
136	1	0x40	DIFE-Field Tariff/Unit information	
137	1	0x83	VIF-Field Energy varh	
138	1	0xFF	VIFE-Field Manufacturer specific	
139	1	0x01	VIFE-Field Phase L1	
140	8	…	Energy	
148	1	0x87	DIF-Field 64 bit unsigned integer	Reactive Energy Export L2
149	1	0x80	DIFE-Field Tariff/Unit information	
150	1	0x40	DIFE-Field Tariff/Unit information	
151	1	0x83	VIF-Field Energy varh	
152	1	0xFF	VIFE-Field Manufacturer specific	
153	1	0x02	VIFE-Field Phase L2	
154	8	…	Energy	
162	1	0x87	DIF-Field 64 bit unsigned integer	Reactive Energy Export L3
163	1	0xA0	DIFE-Field Tariff/Unit information	
164	1	0x40	DIFE-Field Tariff/Unit information	
165	1	0x83	VIF-Field Energy varh	
166	1	0xFF	VIFE-Field Manufacturer specific	
167	1	0x03	VIFE-Field Phase L3	
168	8	…	Energy	
176	1	0x04	DIF-Field 32 bit signed integer	Active Power L123
177	1	0x2B	VIF-Field Power W	
178	4	…	Power	
182	1	0x04	DIF-Field 32 bit signed integer	Active Power L1
183	1	0xAB	VIF-Field Power W	
184	1	0xFF	VIFE-Field Manufacturer specific	
185	1	0x01	VIFE-Field Phase L1	
186	4	…	Power	
190	1	0x04	DIF-Field 32 bit signed integer	Active Power L2
191	1	0xAB	VIF-Field Power W	
192	1	0xFF	VIFE-Field Manufacturer specific	
193	1	0x02	VIFE-Field Phase L2	
194	4	…	Power	
198	1	0x04	DIF-Field 32 bit signed integer	Active Power L3
199	1	0xAB	VIF-Field Power W	
200	1	0xFF	VIFE-Field Manufacturer specific	
201	1	0x03	VIFE-Field Phase L3	
202	4	…	Power	
206	1	0x02	DIF-Field 16 bit signed integer	Voltage L1-N
207	1	0xFD	VIF-Field Extended VIF table	
208	1	0xC8	VIFE-Field Voltage 0.1V	
209	1	0xFF	VIFE-Field Manufacturer specific	
210	1	0x01	VIFE-Field Phase L1	
211	2	…	Voltage	
213	1	0x02	DIF-Field 16 bit signed integer	Voltage L2-N
214	1	0xFD	VIF-Field Extended VIF table	

Byte Nr.	Size	Value	Description	Meaning
215	1	0xC8	VIFE-Field Voltage 0.1V	
216	1	0xFF	VIFE-Field Manufacturer specific	
217	1	0x02	VIFE-Field Phase L2	
218	2	…	Voltage	
220	1	0x02	DIF-Field 16 bit signed integer	Voltage L3-N
221	1	0xFD	VIF-Field Extended VIF table	
222	1	0xC8	VIFE-Field Voltage 0.1V	
223	1	0xFF	VIFE-Field Manufacturer specific	
224	1	0x03	VIFE-Field Phase L3	
225	2	…	Voltage	
227	1	0x02	DIF-Field 16 bit signed integer	Net Frequency L123
228	1	0xFF	VIF-Field Manufacturer specific	
229	1	0x52	VIFE-Field Net Frequency 0.1Hz	
230	2	…	Net Frequency	
232	1	0x02	DIF-Field 16 bit signed integer	Powerfail Count
233	1	0xFD	VIF-Field Extended VIF table	
234	1	0x60	VIFE-Field Powerfail (Reset) counter	
235	2	…	Powerfail Count	
237	1	0xXX	CS	
238	1	0x16	STOP char	

Request Read Datalogger with secondary address

Byte Nr	Size	Value	Description
1	1	0x68	START char LONG telegram
2	1	0x12	L-Field
3	1	0x12	L-Field repeated
4	1	0x68	START char LONG telegram repeated
5	1	0x53 or 0x73	C-Field SND_UD (with or without FCB Bit)
6	1	0xFD	A-Field
7	1	0x51	CI-Field
8 – 15	8	…	Secondary address
16	1	0x04	DIF-Field
17	1	0xFF	VIF-Field manufacturer specific
18	1	0x50	VIFE-Field read datalogger by index
19 – 22	4	…	Index of required record (0x00000000 – 0x0019F7E; 0xFFFFFFFF or 0x0= latest record)
23	1	0xXX	CS
24	1	0x16	STOP char

Answer Read Datalogger with secondary address

Byte Nr	Size	Value	Description	Information
1	1	0x68	START char LONG telegram	
2	1	0x7C	L-Field	
3	1	0x7C	L-Field repeated	
4	1	0x68	START char LONG telegram repeated	
5	1	0x08	C-Field	
6	1	0x00	A-Field primary address	
7	1	0x72	CI-Field 12 Byte header + format data	
8 – 11	4	…	Secondary Address	Secondary Address
12 – 13	2	0x15 0xB5	Manufacturer Code EMU	
14	1	0x16	Meter version 22	
15	1	0x02	Medium Electricity	
16	1	0xXX	Access Number	
17	1	0xXX	Status Byte	Status Byte
18 – 19	2	0x00 0x00	Signature No Encryption	
20	1	0x04	DIF-Field	
21	1	0xFF	VIF-Field manufacturer specific	
22	1	0x53	VIFE-Field Index of datalogger entry	
23 – 26	4	…	Data Logger Index (uint32)	Data Logger Index
27	1	0x01	DIF-Field	
28	1	0xFF	VIF-Field manufacturer specific	
29	1	0x54	VIFE-Field Status byte of datalogger entry	
30	1	…	Datalogger Status Byte (uint8)	
31	1	0x04	DIF-Field	
32	1	0x6D	VIF-Field Date/Time TypeF	Timestamp
33 – 36	4	…	Timestamp TypeF	
37	1	0x87	DIF-Field 64 Bit Integer	
38	1	0x10	DIFE-Field Tariff/Unit information	
39	1	0x03	VIF-Field Wh	
40 – 47	8	…	Energy value (uint64)	Active Energy Import Tariff 1
48	1	0x87	DIF-Field 64 Bit Integer	
49	1	0x20	DIFE-Field Tariff/Unit information	
50	1	0x03	VIF-Field Wh	
51 – 58	8	…	Energy value (uint64)	Active Energy Import Tariff 2
59	1	0x87	DIF-Field 64 Bit Integer	
60	1	0x10	DIFE-Field Tariff/Unit information	
61	1	0x03	VIF-Field Wh	
62 – 69	8	…	Energy value (uint64)	Active Energy Export Tariff 1
70	1	0x87	DIF-Field 64 Bit Integer	
71	1	0x20	DIFE-Field Tariff/Unit information	
72	1	0x03	VIF-Field Wh	
73 – 80	8	…	Energy value (uint64)	Active Energy Export Tariff 1
81	1	0x87	DIF-Field 64 Bit Integer	
82	1	0x90	DIFE-Field Tariff/Unit information	
83	1	0x40	DIFE-Field Tariff/Unit information	
84	1	0x03	VIF-Field Wh	
85 – 92	8	…	Energy value (uint64)	Reactive Energy Import Tariff 1
93	1	0x87	DIF-Field 64 Bit Integer	
94	1	0xA0	DIFE-Field Tariff/Unit information	
95	1	0x40	DIFE-Field Tariff/Unit information	
96	1	0x03	VIF-Field Wh	
97 – 104	8	…	Energy value (uint64)	Reactive Energy Import Tariff 2
105	1	0x87	DIF-Field 64 Bit Integer	
106	1	0x90	DIFE-Field Tariff/Unit information	

Byte Nr	Size	Value	Description	Information
107	1	0x40	DIFE-Field Tariff/Unit information	
108	1	0x03	VIF-Field Wh	
109 – 116	8	…	Energy value (uint64)	Reactive Energy Export Tariff 1
117	1	0x87	DIF-Field 64 Bit Integer	
118	1	0xA0	DIFE-Field Tariff/Unit information	
119	1	0x40	DIFE-Field Tariff/Unit information	
120	1	0x03	VIF-Field Wh	
121 – 128	8	…	Energy value (uint64)	Reactive Energy Export Tariff 2
129	1	0xXX	CS	
130	1	0x16	STOP char	

Request Read Datalogger with primary address

Byte Nr.	Size	Value	Description
1	1	0x68	START char LONG telegram
2	1	0x0A	L-Field
3	1	0x0A	L-Field repeated
4	1	0x68	START char LONG telegram repeated
5	1	0x53 or 0x73	C-Field SND_UD (with or without FCB Bit)
6	1	0xXX	A-Field
7	1	0x51	CI-Field
8	1	0x04	DIF-Field
9	1	0xFF	VIF-Field manufacturer specific
10	1	0x50	VIFE-Field read datalogger by index
11 – 14	4	…	Index of required record (0x00000000 – 0x0019F7E; 0xFFFFFFFF or 0x0= latest record)
15	1	0xXX	CS
16	1	0x16	STOP char

Answer Read Datalogger with primary address

Byte Nr	Size	Value	Description	Information
1	1	0x68	START char LONG telegram	
2	1	0x7C	L-Field	
3	1	0x7C	L-Field repeated	
4	1	0x68	START char LONG telegram repeated	
5	1	0x08	C-Field	
6	1	0xXX	A-Field primary address	
7	1	0x72	CI-Field 12 Byte header + format data	
8 – 11	4	…	Secondary Address	Secondary Address
12 – 13	2	0x15 0xB5	Manufacturer Code EMU	
14	1	0x16	Meter version 22	
15	1	0x02	Medium Electricity	
16	1	0xXX	Access Number	
17	1	0xXX	Status Byte	Status Byte
18 – 19	2	0x00 0x00	Signature No Encryption	
20	1	0x04	DIF-Field	
21	1	0xFF	VIF-Field manufacturer specific	
22	1	0x53	VIFE-Field Index of datalogger entry	
23 – 26	4	…	Data Logger Index (uint32)	Data Logger Index
27	1	0x01	DIF-Field	

Byte Nr	Size	Value	Description	Information
28	1	0xFF	VIF-Field manufacturer specific	
29	1	0x54	VIFE-Field Status byte of datalogger entry	
30	1	…	Datalogger Status Byte (uint8)	
31	1	0x04	DIF-Field	
32	1	0x6D	VIF-Field Date/Time TypeF	Timestamp
33 – 36	4	…	Timestamp TypeF	
37	1	0x87	DIF-Field 64 Bit Integer	
38	1	0x10	DIFE-Field Tariff/Unit information	
39	1	0x03	VIF-Field Wh	
40 – 47	8	…	Energy value (uint64)	Active Energy Import Tariff 1
48	1	0x87	DIF-Field 64 Bit Integer	
49	1	0x20	DIFE-Field Tariff/Unit information	
50	1	0x03	VIF-Field Wh	
51 – 58	8	…	Energy value (uint64)	Active Energy Import Tariff 2
59	1	0x87	DIF-Field 64 Bit Integer	
60	1	0x10	DIFE-Field Tariff/Unit information	
61	1	0x03	VIF-Field Wh	
62 – 69	8	…	Energy value (uint64)	Active Energy Export Tariff 1
70	1	0x87	DIF-Field 64 Bit Integer	
71	1	0x20	DIFE-Field Tariff/Unit information	
72	1	0x03	VIF-Field Wh	
73 – 80	8	…	Energy value (uint64)	Active Energy Export Tariff 1
81	1	0x87	DIF-Field 64 Bit Integer	
82	1	0x90	DIFE-Field Tariff/Unit information	
83	1	0x40	DIFE-Field Tariff/Unit information	
84	1	0x03	VIF-Field Wh	
85 – 92	8	…	Energy value (uint64)	Reactive Energy Import Tariff 1
93	1	0x87	DIF-Field 64 Bit Integer	
94	1	0xA0	DIFE-Field Tariff/Unit information	
95	1	0x40	DIFE-Field Tariff/Unit information	
96	1	0x03	VIF-Field Wh	
97 – 104	8	…	Energy value (uint64)	Reactive Energy Import Tariff 2
105	1	0x87	DIF-Field 64 Bit Integer	
106	1	0x90	DIFE-Field Tariff/Unit information	
107	1	0x40	DIFE-Field Tariff/Unit information	
108	1	0x03	VIF-Field Wh	
109 – 116	8	…	Energy value (uint64)	Reactive Energy Export Tariff 1
117	1	0x87	DIF-Field 64 Bit Integer	
118	1	0xA0	DIFE-Field Tariff/Unit information	
119	1	0x40	DIFE-Field Tariff/Unit information	
120	1	0x03	VIF-Field Wh	
121 – 128	8	…	Energy value (uint64)	Reactive Energy Export Tariff 2
129	1	0xXX	CS	
130	1	0x16	STOP char	

Further Settings

ViFE

VIFE (bin)	VIFE (hex)	Description
0bX1010011	0x53	Index of datalogger entry
0bX1100010	0x62	Time 32Bit Epoch

Secondary Address

The following telegrams often have the bytes 8-15 (Secondary Address (8-11), Manufacturer code (12-13), Meter Version (14) and Medium (15)) summarized as “Secondary Address”. For these telegrams you can substitute the bytes 12-15 with FF FF FF FF.

Request Set Time/Date Epoch with secondary address

Byte Nr.	Size	Value	Description
1	1	0x68	START char LONG telegram
2	1	0x12	L-Field
3	1	0x12	L-Field repeated
4	1	0x68	START char LONG telegram repeated
5	1	0x53 or 0x73	C-Field SND_UD (with or without FCB Bit)
6	1	0xFD	A-Field
7	1	0x51	CI-Field
8 – 15	8	…	Secondary address
16	1	0x04	DIF-Field
17	1	0xFF	VIF-Field manufacturer specific
18	1	0x62	VIFE-Field set time/date with 32Bit UNIX epoch
19 – 22	4	…	32Bit UNIX epoch
23	1	0xXX	CS
24	1	0x16	STOP char

Note: The time synchronization can be used as a broadcast transmission. To synchronize all meters on the bus simultaneously, the secondary address needs to be FF FF FF FF.

Answer Set Time/Date Epoch with secondary address

Byte Nr.	Size	Value	Description
1	1	0xE5	ACK

Note: The LP variant of the EMU Professional II acknowledges a time synchronization only once every 15 minutes.

Switching between the different telegrams

The readout telegram of the EMU Professional II can be configured with the following telegram. You can set the new telegram with the bytes 19-22 (marked with TT TT TT TT in the telegram below). The following telegram switches the readout registers over M-bus from the default 32bit values to 64bit values.

Note: The different telegrams only work on meters from a specific serial number onwards.

Description	Bytes 19 - 22	From serial number
Switching to 32bit Readout	00 00 00 00	23260000
Switching to 64bit Readout	01 00 00 00	23260000
Switching to 32bit Readout	02 00 00 00	26171000
Switching to 64bit Readout	03 00 00 00	26171000

Byte Nr.	Size	Value	Description
1	1	0x68	START char LONG telegram
2	1	0x12	L-Field
3	1	0x12	L-Field repeated
4	1	0x68	START char LONG telegram repeated
5	1	0x53 or 0x73	C-Field SND_UD (with or without FCB Bit)
6	1	0xFD	A-Field
7	1	0x51	CI-Field
8 – 15	8	…	Secondary address
16	1	0x04	DIF-Field
17	1	0xFF	VIF-Field manufacturer specific
18	1	0x64	VIFE-Field Set M-Bus Telegram
19 – 22	4	TT TT TT TT	Set telegram flag
23	1	0xXX	CS
24	1	0x16	STOP char

Switching Tariff via M-Bus

The following telegram switches the active tariff over M-bus. The FF in the middle are placeholders for the secondary address.

Byte Nr.	Size	Value	Description
1	1	0x68	START char LONG telegram
2	1	0x0F	L-Field
3	1	0x0F	L-Field repeated
4	1	0x68	START char LONG telegram repeated
5	1	0x53 or 0x73	C-Field SND_UD (with or without FCB Bit)
6	1	0xFD	A-Field
7	1	0x51	CI-Field
8 – 15	8	…	Secondary address
16	1	0x01	DIF-Field
17	1	0xFF	VIF-Field manufacturer specific
18	1	0x13	VIFE-Field Set tariff
19	1	0x0X	Set new tariff 0x01 – 0x04
20	1	0xXX	CS
21	1	0x16	STOP char

Note: This telegram only works on meters with a serial number of 23260000 or greater.

Let LCD Blink

With this telegram you can let the LCD blink on a specific meter. This is especially helpful if you need to find a meter in an installation.

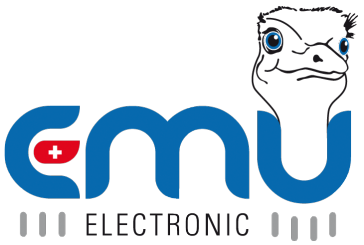
Byte Nr.	Size	Value	Description
1	1	0x68	START char LONG telegram
2	1	0x0F	L-Field
3	1	0x0F	L-Field repeated
4	1	0x68	START char LONG telegram repeated
5	1	0x53 or 0x73	C-Field SND_UD (with or without FCB Bit)
6	1	0xFD	A-Field
7	1	0x51	CI-Field
8 – 15	8	…	Secondary address
16	1	0x01	DIF-Field
17	1	0xFF	VIF-Field manufacturer specific
18	1	0x65	VIFE-Field Set tariff
19	1	0xXX	CS
20	1	0x16	STOP char

Note: This telegram only works on meters with a serial number of 23260000 or greater.

Definition of the Status-Codes

The status code is bit-coded. The following table describes the status byte for binary, hex, and decimal read out.

Bit-Position	Bin	Hex	Dec	Description
0	0b00000000	0x0	0	No Change
0	0b00000001	0x1	1	Time changed
1	0b00000010	0x2	2	Current transformer ratio changed
2	0b00000100	0x4	4	Voltage transformer ratio changed
3	0b00001000	0x8	8	Impulse length changed
4	0b00010000	0x10	16	Impulse ratio changed
5	0b00100000	0x20	32	Power Failure
6	0b01000000	0x40	64	No time synchronization occurred
7	0b10000000	0x80	128	Logbook is full



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