EBEHAKO electronic GmbH

MODBUS Address-table UCM 5 - V1.0

Function code 3

Address DEC	Address HEX	L/H	Register name	Info / Range of values
0	00 00		Reactive Power	Signed 32-bit, Unit: var Input 1, Impulse time * impulse ratio
1	00 01			
2	00 02		Active Power	Signed 32-bit, Unit: W Input 2, Impulse time * impulse ratio
3	00 03			
4	00 04		Apparent Power	Signed 32-bit, Unit: VA $S = \sqrt{P^2 + Q^2}$
5	00 05			
9	00 09	L	IO-State	Byte, Bit 1..5 High: Input/Output is active, Low: Input/Output is not active
10	00 0A		IN 1	Signed 32-bit Impulse counter of actual synch-period. After synch event the impulses of the hole synch-period are stored in pulses of previous synch-period and the pulse counter is set to zero
11	00 0B			
12	00 0C		IN 2	
13	00 0D			
14	00 0E		IN 3	
15	00 0F			
16	00 10		IN 4	
17	00 11			
18	00 12		IN 5	
19	00 13			
20	00 14		IN 1	Signed 32-bit Impulses of last synch period
21	00 15			
22	00 16		IN 2	
23	00 17			
24	00 18		IN 3	
25	00 19			
26	00 1A		IN 4	
27	00 1B			
28	00 1C		IN 5	
29	00 1D			
30	00 1E		IN 1	Signed 32-bit, Unit ms Time since the last impulse. If a new impulse occurs the value of this timer is stored in Timer of previous impulse and the timer is set to zero. In case of synch-input it is the time since the last synch-event.
31	00 1F			
32	00 20		IN 2	
33	00 21			
34	00 22		IN 3	
35	00 23			
36	00 24		IN 4	
37	00 25			
38	00 26		IN 5	
39	00 27			
40	00 28		IN 1	Signed 32-bit, Unit ms Time of previous impulse. In case of synch-input it is the time of the previous synch-period.
41	00 29			
42	00 2A		IN 2	
43	00 2B			
44	00 2C		IN 3	
45	00 2D			
46	00 2E		IN 4	
47	00 2F			
48	00 30		IN 5	
49	00 31			
50	00 32		IN 1	Signed 32-bit
51	00 33			

Pulses of actual synch-period

Pulses of previous-synch period

(complete synch period)

Time since the last impulse

Time of previous impulse

Sum of all pulses

52	00	34		IN 2	Sum of all impulses. Note: It is not possible to count impulses if the device is not powered.
53	00	35			
54	00	36		IN 3	
55	00	37			
56	00	38		IN 4	
57	00	39			
58	00	3A		IN 5	
59	00	3B			
60	00	3C		IN 1	Signed 32-bit, Unit: W, VA, var Input-impulse-time * Input-impulse-ratio
61	00	3D			
62	00	3E		IN 2	
63	00	3F			
64	00	40		IN 3	Power
65	00	41			
66	00	42		IN 4	
67	00	43			
68	00	44		IN 5	
69	00	45			
70	00	46		IN 1	Signed 32-bit Maximum pulses are stored if synch-event occurs within synch-time (+ 10%)
71	00	47			
72	00	48		IN 2	
73	00	49			Maximum pulses of synch-period associated by synch-time
74	00	4A		IN 3	
75	00	4B			
76	00	4C		IN 4	
77	00	4D			
78	00	4E		IN 5	
79	00	4F			
80	00	50		IN 1	Signed 32-bit Maximum pulses between tow synch-events
81	00	51			
82	00	52		IN 2	
83	00	53			
84	00	54		IN 3	Maximum pulses of synch-period
85	00	55			
86	00	56		IN 4	
87	00	57			
88	00	58		IN 5	
89	00	59			
90	00	5A		IN 1	Unsigned 16-bit, Unit sec Time of synch-period of maximum pulses event
91	00	5B		IN 2	
92	00	5C		IN 3	Time of synch-period of maximum pulses
93	00	5D		IN 4	
94	00	5E		IN 5	
96	00	60		Internal use	10
101 …	00	65		SETTINGS	See settings section for further details
255	00	FF	**H**	Hardware identify.	10
			L	Software-version	Byte – exp.: 10 → V1.0
998	03	E6	W	EEPROM-state	Internal use
999	03	E7	W	Memory-counter	Number of data-lines in the data-memory

1000	03 E8	W	IN 1	Pulses of last periods	Signed 16-bit, Range: 0..32768, Error = -1 IN 1 exp.: 1000 = last period, 1001 = 1 period before, 1002 2 periods before, 1003 …
…					
2000	07 D0	W	IN 2		
…					
3000	0B B8	W	IN 3		
…					
4000	0F A0	W	IN 4		
…					
5000	13 88	W	IN 5		Signed 16-bit, Unit sec, Range: 0..32768, Error = -1 Duration of synch-period
…					

Controller settings (read / write)

Address					
Code R= 3	*Code W= 6*	***H/L***	***Register name***	*Reset value*	***Description** / Range of values / Examples*
101	101	H	Baud rate (Password: H=L)	0	Byte 0 = 9600, 1= 19200, 2 = 38400, other values= 38400
		L	Baud rate	2	
102	102	L	Reserved (Mode)	0	Byte, not used
103, 104	103, 104		IN 1	1	Single, Unit: Impulse / kWh Input-impulse-ratio is used to calculate the actual power
105, 106	105, 106		IN 2		
107, 108	107, 108		IN 3 Impulse-ratio		
109, 110	109, 110		IN 4		
111, 112	111, 112		IN 5		
113	113	L	Input-Debounce-Time	5	Byte, Unit ms - Impulse-length that are shorter than the debounce-time will be ignored.
114	114	L	Number of pulse-times	2	Byte, Valid range: 0..4 – Number of last pulse-times to calculate power (if values > 4 will set 4)
115	115	L	Synch-Mode	0	0= Synch with impulse at synch-input 1= Synch with internal timer (synch-time)
116	116	W	Synch-Time	0	Unsigned 16-bit, Unit sec Synch-mode= 0: store max. pulses associated by this time Synch-mode= 1: Simulate synch-impulse after this time
-	120	L	Clear pulse sum counter	-	Bit 1..5 for IN 1..5. If bit is set clear sum pulse counter exp.: 0h06 → clear counter for IN 1 and IN 2
-	121	L	Clear pulse counter of actual period	-	Bit 1..5 for IN 1..5. If bit is set clear pulse counter exp.: 0h06 → clear counter for IN 1 and IN 2
-	122	L	Clear max. pulses per period register	-	Clear all max pulses registers
-	123	L	Clear pulse register of last periods	-	Write 0h3E to clear

History

V1.0
- Initial Version

V1.1
- Impulse-ratio as single (add 5 word)