

# SCADA Interface Register V2.19.0

## General Values

### READ VALUES (Function Code 03)

Index	Address	Length in registers	Datatype	Abbreviation	Description	Factor	Offset	Range	Unit	Comment	SCADA version
1	40000	1	U16		Device type	1	0	[0; 6]	---	Possible values: 0 = Datalogger (blue'Log) 1 = Inverter 2 = Sensor 3 = Meter 4 = String 5 = Tracker 6 = Status DI extern 7 = Genset	1.0.0
2	40001	32	String		Vendor	---	---		---		1.0.0
3	40033	32	String		Model	---	---		---		1.0.0
4	40065	16	String		Serial	---	---		---		1.0.0
5	40081	16	String		Firmware Version	---	---		---	Formatted firmware version of this device	1.0.0
6	40097	16	String		PortId	---	---		---	Internal Port-ID of the blue'Log e.g. 'BM_RS485_1' or '192.168.23.42:502'	1.0.0
7	40113	1	U16		Bus address	1	0		---		1.0.0
8	40114 - 40489				Reserved					Unused. 0xFFFF	
9	40490 - 40499	1	U16	D_IN1-10	Digital Input	---	0	[0;1]	---	Values: 0: Normal state 1: Active state	2.0.0 (deprecated with version ≥ 2.7.0)
10	40500 - 40538	2	U32	ERROR1-20	Error Registers	---	0		---	Raw value read from the device. Mapping to alarms/events according to the specification of the device meteocontrol-internal: CSV file, see alarms section below Raw value read from the device.	1.0.0
11	40540 - 40578	2	U32	STATE1-20	Status Registers	---	0		---	Mapping to alarms/events according to the specification of the device meteocontrol-internal: CSV file, see alarms section below	
12	40580	2	F32	T	Temperature	---	0		°C	Temperature of all devices except Sensors	1.0.1
13	40582 - 40620	2	F32	T1-20	Temperatures	---	0		°C	Temperatures of all devices except Sensors	1.0.0 (since 1.0.1 F32)
14	40622 - 40660	2	U32	STATE21-40	Status Registers	---	0		---		2.2.0
15	40662-40700	2	U32	ERROR21-40	Error Registers	---	0		---		2.3.0
16	40702 - 40741	1	U16	D_IN1-40	Digital Input	---	0	[0;1]	---	Values: 0: Normal state 1: Active state	2.7.0

## Inverter

### READ VALUES (Function Code 03)

Index	Address	Length in registers	Datatype	Function Code	Abbreviation	Description	Factor	Offset	Range	Unit	Comment	SCADA version
1	41000	2	F32	FC3	P_AC	Power AC	1	0		W		1.0.0
2	41002	2	F32	FC3	Q_AC	Reactive power	1	0		VAr		1.0.0
3	41004	2	F32	FC3	S_AC	Apparent power	1	0		VA		1.0.0
4	41006	2	F32	FC3	COS_PHI	Power factor (cos phi)	1	0		---		1.0.0
5	41008	2	F32	FC3	U_AC	Voltage AC	1	0		V		1.0.0
6	41010	2	F32	FC3	I_AC	Current AC	1	0		A		1.0.0
7	41012	2	F32	FC3	F_AC	Grid frequency	1	0		Hz		1.0.0
8	41014	2	F32	FC3	R_ISO	Insulation resistance	1	0		Ohm		1.0.0
9	41016	2	F32	FC3	P_AC1	Power AC phase 1	1	0		W		1.0.0
10	41018	2	F32	FC3	P_AC2	Power AC phase 2	1	0		W		1.0.0
11	41020	2	F32	FC3	P_AC3	Power AC phase 3	1	0		W		1.0.0
12	41022	2	F32	FC3	Q_AC1	Reactive power phase 1	1	0		VAr		1.0.0
13	41024	2	F32	FC3	Q_AC2	Reactive power phase 2	1	0		VAr		1.0.0
14	41026	2	F32	FC3	Q_AC3	Reactive power phase 3	1	0		VAr		1.0.0
15	41028	2	F32	FC3	S_AC1	Apparent power phase 1	1	0		VA		1.0.0
16	41030	2	F32	FC3	S_AC2	Apparent power phase 2	1	0		VA		1.0.0
17	41032	2	F32	FC3	S_AC3	Apparent power phase 3	1	0		VA		1.0.0
18	41034	2	F32	FC3	COS_PHI1	Power factor (cos phi) phase 1	1	0		---		1.0.0
19	41036	2	F32	FC3	COS_PHI2	Power factor (cos phi) phase 2	1	0		---		1.0.0
20	41038	2	F32	FC3	COS_PHI3	Power factor (cos phi) phase 3	1	0		---		1.0.0
21	41040	2	F32	FC3	U_AC1	Voltage AC phase 1	1	0		V		1.0.0
22	41042	2	F32	FC3	U_AC2	Voltage AC phase 2	1	0		V		1.0.0
23	41044	2	F32	FC3	U_AC3	Voltage AC phase 3	1	0		V		1.0.0
24	41046	2	F32	FC3	U_AC_L1L2	Phase voltage L1L2	1	0		V		1.0.0
25	41048	2	F32	FC3	U_AC_L2L3	Phase voltage L2L3	1	0		V		1.0.0

Index	Address	Length in registers	Datatype	Function Code	Abbreviation	Description	Factor	Offset	Range	Unit	Comment	SCADA version
26	41050	2	F32	FC3	U_AC_L3L1	Phase voltage L3L1	1	0		V		1.0.0
27	41052	2	F32	FC3	I_AC1	Current AC phase 1	1	0		A		1.0.0
28	41054	2	F32	FC3	I_AC2	Current AC phase 2	1	0		A		1.0.0
29	41056	2	F32	FC3	I_AC3	Current AC phase 3	1	0		A		1.0.0
30	41058	2	F32	FC3	F_AC1	Grid frequency phase 1	1	0		Hz		1.0.0
31	41060	2	F32	FC3	F_AC2	Grid frequency phase 2	1	0		Hz		1.0.0
32	41062	2	F32	FC3	F_AC3	Grid frequency phase 3	1	0		Hz		1.0.0
33	41064	2	F32	FC3	E_DAY	Energy generated per day	1	0		Wh		1.0.0
34	41066	2	F32	FC3	E_TOTAL	Energy total	1	0		Wh		1.0.0
35	41068	2	F32	FC3	OT_AC_TOTAL	Total operating hours	1	0		h		1.0.0
36	41070	2	F32	FC3	FT_AC_TOTAL	Total feed-in hours	1	0		h		1.0.0

Index	Address	Length in registers	Datatype	Function Code	Abbreviation	Description	Factor	Offset	Range	Unit	Comment	SCADA version
37	41072	2	F32	FC3	U_DC_PE	Voltage DC positive pole to earth	1	0		V		1.2.0
38	41074	2	F32	FC3	U_DC_NE	Voltage DC negative pole to earth	1	0		V		1.2.0
39	41076	2	F32	FC3	P_AC_SET_ABS	Absolute active power setpoint	1	0		W		2.6.0
40	41078	2	F32	FC3	P_AC_SET_REL	Relative active power setpoint	1	0		%		2.6.0
41	41080	2	F32	FC3	P_DC	Power DC	1	0		W		1.0.0
42	41082	2	F32	FC3	U_DC	Voltage DC	1	0		V		1.0.0
43	41084	2	F32	FC3	I_DC	Current DC total	1	0		A		1.0.0
44	41086 - 41089	4				Reserved					Unused. 0xFFFF	
45	41090	1	U16	FC3		MPPT Count	1	0	[1, 12]	---	MPPT Count: number of MPPTs at this Inverter	1.0.0
46	41091	1	U16	FC3		String Count	1	0	[1, 48]	---	String Count: total number of strings	1.0.0
47	41092-41099	8				Reserved					Unused. 0xFFFF	
48	41100 - 41xxx	2	F32	FC3	P_DC1-12	Power DC MPPT 1-12	1	0		W	<p><b>Repeating Block:</b> Block of P_DCx, U_DCx and I_DCx will be repeated 12 times.</p> <p><b>Example:</b></p> <p>41100: P_DC1 41102: U_DC1 41104: I_DC1</p> <p>41106: P_DC2 41108: U_DC2 41110: I_DC2</p> <p>41112: P_DC3 41114: U_DC3 41116: I_DC3</p> <p>...</p> <p>41166: P_DC12 41168: U_DC12 41170: I_DC12</p>	1.0.0
49	41102 - 41xxx	2	F32	FC3	U_DC1-12	Voltage DC MPPT 1-12	1	0		V		
50	41104 - 41xxx	2	F32	FC3	I_DC1-12	Current DC MPPT 1-12	1	0		A		

Index	Address	Length in registers	Datatype	Function Code	Abbreviation	Description	Factor	Offset	Range	Unit	Comment	SCADA version
51	41172-41266	2	F32	FC3	I_DCx_y	Current DC MPPT x input y	1	0		A	<b>Repeating Block:</b> Starts directly after the P_DCx, U_DCx and I_DCx Block (41172) Repeats for all String values of the MPPTs String count is the total string count of all MPPTs and has to be dispensed evenly  <b>Example:</b>  MPPT Count (Reg. 41090) = 4 String Count (Reg. 41091) = 11 41172: I_DC1_1 41174: I_DC1_2 41176: I_DC1_3  41178: I_DC2_1 41180: I_DC2_2 41182: I_DC2_3  41184: I_DC3_1 41186: I_DC3_2 41188: I_DC3_3  41190: I_DC4_1 41192: I_DC4_2  // no I_DC4_3 because there are only 11	1.0.0  extended with 2.8.0
52	... - 41799					Reserved					Unused. 0xFFFF	
53	41800	2	F32	FC3	R_AC	Grid impedance	1	0		Ohm		2.9.0
54	41802-41998	197				Reserved					Unused. 0xFFFF	

*WRITE VALUES (Function Code 16)*

55	41999	1	U16	FC16	SCADA_START_STOP	Start / Stop individual Inverter	1	0		-	0 = Stop 1 = Start If driver doesn't offer the StartStopFeature: ModbusException with ErrorCode 4	1.3.0
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## Sensor

READ VALUES (Function Code 03)

Index	Address	Length in registers	Datatype	Abbreviation	Description	Factor	Offset	Range	Unit	Comment	SCADA version
1	42000	2	F32	E_W_D	Wind direction	1	0		°		1.0.0
2	42002	2	F32	E_W_S	Wind speed	1	0		m/s		1.0.0
3	42004	2	F32	E_ALT1	Altitude	1	0		m		1.0.0
4	42006	2	F32	E_PRECIPITATION	Precipitation type	1	0		---		1.0.0
5	42008	2	F32	E_RF_ABS1	Precipitation quantity absolute	1	0		mm		1.0.0
6	42010	2	F32	E_RF_I1	Precipitation intensity	1	0		mm/h		1.0.0
7	42012	2	F32	E_AH_ABS1	Humidity absolute 1	1	0		g/m <sup>2</sup>		1.0.0
8	42014	2	F32	E_AH_REL1	Humidity relative	1	0		%		1.0.0
9	42016	2	F32	E_AP_ABS1	Air pressure absolute	1	0		hPa		1.0.0
10	42018	2	F32	E_AP_REL1	Air pressure relative	1	0		hPa		1.0.0
11	42020	2	F32	E_IP_ABS	Internal air pressure	1	0		hPa		1.0.0
12	42022	2	F32	E_IH_REL	Internal relative humidity	1	0		%		1.0.0
13	42024	2	F32	E_F_S	Fan speed	1	0		rpm		1.0.0
14	42026	2	F32	E_DEWPOINT	Dewpoint	1	0		°C		2.18.0
15	42028-42029	2			Reserved					Unused. 0xFFFF	
16	42030	2	F32	SUN_H	Sunshine duration	1	0		h		1.0.0
17	42032	2	F32	E_TILT	Sensor tilt	1	0		°		1.0.0
18	42034	2	F32	E_SRAD	Global irradiation energy	1	0		Wh/m <sup>2</sup>		1.0.0
19	42036	2	F32	SRAD	Irradiance	1	0		W/m <sup>2</sup>		1.0.0
20	42038	2	F32	SRAD1	Irradiance 1	1	0		W/m <sup>2</sup>		1.0.0
21	42040	2	F32	SRAD2	Irradiance 2	1	0		W/m <sup>2</sup>		1.0.0
22	42042	2	F32	SRAD3	Irradiance 3	1	0		W/m <sup>2</sup>		1.0.0
23	42044	2	F32	SRAD4	Irradiance 4	1	0		W/m <sup>2</sup>		1.0.0
24	42046	2	F32	SRAD5	Irradiance 5	1	0		W/m <sup>2</sup>		1.0.0
25	42048	2	F32	T	Temperature	1	0		°C		1.0.0
26	42050	2	F32	T1	Temperature 1	1	0		°C		1.0.0
27	42052	2	F32	T2	Temperature 2	1	0		°C		1.0.0
28	42054	2	F32	T3	Temperature 3	1	0		°C		1.0.0
29	42056	2	F32	T4	Temperature 4	1	0		°C		1.0.0
30	42058	2	F32	T5	Temperature 5	1	0		°C		1.0.0
31	42060	2	F32	T6	Temperature 6	1	0		°C		1.0.0
32	42062	2	F32	T7	Temperature 7	1	0		°C		1.0.0
33	42064	2	F32	T8	Temperature 8	1	0		°C		1.0.0
34	42066	2	F32	T9	Temperature 9	1	0		°C		1.0.0
35	42068	2	F32	T10	Temperature 10	1	0		°C		1.0.0
36	42070	2	F32	T11	Temperature 11	1	0		°C		1.0.0
37	42072	2	F32	T12	Temperature 12	1	0		°C		1.0.0
38	42074	2	F32	T13	Temperature 13	1	0		°C		1.0.0
39	42076	2	F32	T14	Temperature 14	1	0		°C		1.0.0
40	42078	2	F32	T15	Temperature 15	1	0		°C		1.0.0
41	42080	2	F32	T16	Temperature 16	1	0		°C		1.0.0
42	42082	2	F32	T17	Temperature 17	1	0		°C		1.0.0
43	42084	2	F32	T18	Temperature 18	1	0		°C		1.0.0
44	42086	2	F32	T19	Temperature 19	1	0		°C		1.0.0
45	42088	2	F32	T20	Temperature 20	1	0		°C		1.0.0
46	42090	2	F32	I_SC1	Short circuit current 1	1	0		A		1.0.0
47	42092	2	F32	I_SC2	Short circuit current 2	1	0		A		1.0.0
48	42094	2	F32	SLI_RAW	Soiling loss raw	1	0		%		1.0.0
49	42096	2	F32	SLI	Soiling loss	1	0		%		1.0.0
50	42098	2	F32	SLI1	Soiling loss 1	1	0		%		1.0.0
51	42100	2	F32	SLI2	Soiling loss 2	1	0		%		1.0.0
52	42102	2	F32	E_RF_DIF	Differential precipitation	1	0		mm		1.1.0
53	42104	2	F32	E_RF_DIF1	Differential precipitation 1	1	0		mm		1.1.0
54	42106	2	F32	E_RF_DIF2	Differential precipitation 2	1	0		mm		1.1.0
55	42108	2	F32	E_RF_DIF3	Differential precipitation 3	1	0		mm		1.1.0
56	42110	2	F32	E_RF_DIF4	Differential precipitation 4	1	0		mm		1.1.0
57	42112	2	F32	E_RF_DIF5	Differential precipitation 5	1	0		mm		1.1.0
58	42114	2	F32	E_W_S_MAX	Maximum wind speed	1	0		m/s		1.1.0

Index	Address	Length in registers	Datatype	Abbreviation	Description	Factor	Offset	Range	Unit	Comment	SCADA version
59	42116	2	F32	E W S1 MAX	Wind speed (sensor 1)	1	0		m/s		1.1.0
60	42118	2	F32	E W S2 MAX	Wind speed (sensor 2)	1	0		m/s		1.1.0
61	42120	2	F32	E W S3 MAX	Wind speed (sensor 3)	1	0		m/s		1.1.0
62	42122	2	F32	E W S4 MAX	Wind speed (sensor 4)	1	0		m/s		1.1.0
63	42124	2	F32	E W S5 MAX	Wind speed (sensor 5)	1	0		m/s		1.1.0
64	42126	2	F32	E W S1	Wind speed 1	1	0		m/s		x.y.z
65	42128	2	F32	E W S2	Wind speed 2	1	0		m/s		x.y.z
66	42130	2	F32	E W S3	Wind speed 3	1	0		m/s		x.y.z
67	42132	2	F32	E W S4	Wind speed 4	1	0		m/s		x.y.z
68	42134	2	F32	E W S5	Wind speed 5	1	0		m/s		x.y.z
69	42136	2	F32	E W D1	Wind direction 1	1	0		°		2.5.0
70	42138	2	F32	E W D2	Wind direction 2	1	0		°		2.5.0
71	42140	2	F32	E W D3	Wind direction 3	1	0		°		2.5.0
72	42142	2	F32	E W D4	Wind direction 4	1	0		°		2.5.0
73	42144	2	F32	E W D5	Wind direction 5	1	0		°		2.5.0
74	42146	2	F32	ILLUMINANCE	Illuminance	1	0		lx		2.15.0
75	42148-42149	2			Reserved					Unused. 0xFFFF	
76	42150	2	F32	E SNOW_DEPTH	Snow depth	1	0		m		1.0.0
77	42152	2	F32	SNOW_LOAD1	Snow load 1	1	0		g/m <sup>2</sup>		1.0.0
78	42154	2	F32	SNOW_LOAD2	Snow load 2	1	0		g/m <sup>2</sup>		1.0.0
79	42156	2	F32	SNOW_LOAD3	Snow load 3	1	0		g/m <sup>2</sup>		1.0.0
80	42158	2	F32	SNOW_LOAD4	Snow load 4	1	0		g/m <sup>2</sup>		1.0.0
81	42160-42169	10			Reserved					Unused. 0xFFFF	
82	42170	2	F32	WATER_DEPTH	Water depth	1	0		m		1.4.0
83	42172-42179	8			Reserved					Unused. 0xFFFF	
84	42180	2	F32	SR1	Soiling ratio 1	1	0		%		2.10.0
85	42182	2	F32	SR2	Soiling ratio 2	1	0		%		2.10.0
86	42184	2	F32	SR3	Soiling ratio 3	1	0		%		2.10.0
87	42186	2	F32	SR4	Soiling ratio 4	1	0		%		2.10.0
88	42188	2	F32	SR5	Soiling ratio 5	1	0		%		2.10.0
89	42190	2	F32	SR6	Soiling ratio 6	1	0		%		2.10.0
90	42192	2	F32	SR7	Soiling ratio 7	1	0		%		2.10.0
91	42194	2	F32	SR8	Soiling ratio 8	1	0		%		2.10.0
92	42196	2	F32	SR9	Soiling ratio 9	1	0		%		2.10.0
93	42198-42299	102			Reserved					Unused. 0xFFFF	
94	42300	2	F32	A IN1	Analog input 1	1	0				2.9.0
95	42302	2	F32	A IN2	Analog input 2	1	0				2.9.0
96	42304	2	F32	A IN3	Analog input 3	1	0				2.9.0
97	42306	2	F32	A IN4	Analog input 4	1	0				2.9.0
98	42306-42399				Reserved					Unused. 0xFFFF	2.19.0
99	42400	2	F32	E RF_PARTICLES	Total precipitation particles	1	0				2.19.0
100	42402	2	F32	E DROPS_TOTAL	Total drops	1	0				2.19.0
101	42404	2	F32	E DRIZZLE_PARTICLES	Drizzle particles	1	0				2.19.0
102	42406	2	F32	E SNOW_PARTICLES	Snow particles	1	0				2.19.0
103	42408	2	F32	E HAIL_PARTICLES	Hail particles	1	0				2.19.0
104	42410	2	F32	E DROP_COUNT_00_05	Drop size < 0.5 mm	1	0				2.19.0
105	42412	2	F32	E DROP_COUNT_05_10	Drop size 0.5 ... 1.0 mm	1	0				2.19.0
106	42414	2	F32	E DROP_COUNT_10_15	Drop size 1.0 ... 1.5 mm	1	0				2.19.0
107	42416	2	F32	E DROP_COUNT_15_20	Drop size 1.5 ... 2.0 mm	1	0				2.19.0
108	42418	2	F32	E DROP_COUNT_20_25	Drop size 2.0 ... 2.5 mm	1	0				2.19.0
109	42420	2	F32	E DROP_COUNT_25_30	Drop size 2.5 ... 3.0 mm	1	0				2.19.0
110	42422	2	F32	E DROP_COUNT_30_35	Drop size 3.0 ... 3.5 mm	1	0				2.19.0
111	42424	2	F32	E DROP_COUNT_35_40	Drop size 3.5 ... 4.0 mm	1	0				2.19.0
112	42426	2	F32	E DROP_COUNT_40_45	Drop size 4.0 ... 4.5 mm	1	0				2.19.0
113	42428	2	F32	E DROP_COUNT_45_50	Drop size 4.5 ... 5.0 mm	1	0				2.19.0
114	42430	2	F32	E DROP_COUNT_50_55	Drop size 5.0 ... 5.5 mm	1	0				2.19.0
115	42432	2	F32	E DROP_COUNT_55	Drop size > 5.5 mm	1	0				2.19.0

## Meter

### READ VALUES (Function Code 03)

Index	Address	Length in registers	Datatype	Abbreviation	Description	Factor	Offset	Range	Unit	Comment	SCADA version
1	43000	2	F32	M_AC_P	Power AC	1	0		W		1.0.0
2	43002	2	F32	M_AC_Q	Reactive power	1	0		VAr		1.0.0
3	43004	2	F32	M_AC_S	Apparent power	1	0		VA		1.0.0
4	43006	2	F32	M_AC_PF_COSPHI	Power factor (cos phi)	1	0		---		1.0.0
5	43008	2	F32	M_AC_U	Voltage AC	1	0		V		1.0.0
6	43010	2	F32	M_AC_I	Current AC	1	0		A		1.0.0
7	43012	2	F32	M_AC_I_N	Current neutral conductor	1	0		A		1.0.0
8	43014	2	F32	M_AC_F	Grid frequency	1	0		Hz		1.0.0
9	43016	2	F32	M_AC_P1	Power AC phase 1	1	0		W		1.0.0
10	43018	2	F32	M_AC_P2	Power AC phase 2	1	0		W		1.0.0
11	43020	2	F32	M_AC_P3	Power AC phase 3	1	0		W		1.0.0
12	43022	2	F32	M_AC_Q1	Reactive power phase 1	1	0		VAr		1.0.0
13	43024	2	F32	M_AC_Q2	Reactive power phase 2	1	0		VAr		1.0.0
14	43026	2	F32	M_AC_Q3	Reactive power phase 3	1	0		VAr		1.0.0
15	43028	2	F32	M_AC_S1	Apparent power phase 1	1	0		VA		1.0.0
16	43030	2	F32	M_AC_S2	Apparent power phase 2	1	0		VA		1.0.0
17	43032	2	F32	M_AC_S3	Apparent power phase 3	1	0		VA		1.0.0
18	43034	2	F32	M_AC_PF_COSPHI1	Power factor (cos phi) phase 1	1	0		---		1.0.0
19	43036	2	F32	M_AC_PF_COSPHI2	Power factor (cos phi) phase 2	1	0		---		1.0.0
20	43038	2	F32	M_AC_PF_COSPHI3	Power factor (cos phi) phase 3	1	0		---		1.0.0
21	43040	2	F32	M_AC_U1	Voltage AC phase 1	1	0		V		1.0.0
22	43042	2	F32	M_AC_U2	Voltage AC phase 2	1	0		V		1.0.0
23	43044	2	F32	M_AC_U3	Voltage AC phase 3	1	0		V		1.0.0
24	43046	2	F32	M_AC_U_L1L2	Phase voltage L1L2	1	0		V		1.0.0
25	43048	2	F32	M_AC_U_L2L3	Phase voltage L2L3	1	0		V		1.0.0
26	43050	2	F32	M_AC_U_L3L1	Phase voltage L3L1	1	0		V		1.0.0
27	43052	2	F32	M_AC_I1	Current AC phase 1	1	0		A		1.0.0
28	43054	2	F32	M_AC_I2	Current AC phase 2	1	0		A		1.0.0
29	43056	2	F32	M_AC_I3	Current AC phase 3	1	0		A		1.0.0
30	43058	2	F32	M_AC_F1	Grid frequency phase 1	1	0		Hz		1.0.0
31	43060	2	F32	M_AC_F2	Grid frequency phase 2	1	0		Hz		1.0.0
32	43062	2	F32	M_AC_F3	Grid frequency phase 3	1	0		Hz		1.0.0
33	43064	2	F32	M_AC_E_EXP	Active energy (export)	1	0		Wh		1.0.0
34	43066	2	F32	M_AC_E_IMP	Active energy (import)	1	0		Wh		1.0.0
35	43068	2	F32	M_AC_ES_EXP	Apparent energy (exported)	1	0		VAh		1.0.0
36	43070	2	F32	M_AC_ES_IMP	Apparent energy (imported)	1	0		VAh		1.0.0
37	43072	2	F32	E_INT	Energy generated per interval	1	0		Wh	only for S0 meters	1.0.0
38	43074	2	F32	E_INT_MINUTE	Energy generated last minute	1	0		Wh	only for S0 meters	1.4.0
39	43076	2	U32	TIMESTAMP	TIMESTAMP last minute	1	0		s	UNIX Timestamp from previous minute interval (Last change of E_INT_MINUTE)	1.4.0
40	43078	2	F32	M_AC_E_EXP_T1	Active energy for Tariff 1 (export)	1	0		Wh		2.5.0
41	43080	2	F32	M_AC_E_EXP_T2	Active energy for Tariff 2 (export)	1	0		Wh		2.5.0
42	43082	2	F32	M_AC_E_IMP_T1	Active energy for Tariff 1 (import)	1	0		Wh		2.5.0
43	43084	2	F32	M_AC_E_IMP_T2	Active energy for Tariff 2 (import)	1	0		Wh		2.5.0
44	43086	2	F32	M_AC_EQ_CAP_EXP	Reactive energy (capacitive export)	1	0		VArh		2.5.0
45	43088	2	F32	M_AC_EQ_CAP_IMP	Reactive energy (capacitive import)	1	0		VArh		2.5.0



Index	Address	Length in registers	Datatype	Abbreviation	Description	Factor	Offset	Range	Unit	Comment	SCADA version
46	43090	2	F32	M_AC_EQ_IND_EXP	Reactive energy (inductive export)	1	0		VArh		2.5.0
47	43092	2	F32	M_AC_EQ_IND_IMP	Reactive energy (inductive import)	1	0		VArh		2.5.0
48	43094	2	F32	M_AC_E_MONTH_EXP	Active energy monthly (export)	1	0		Wh		2.5.0
49	43096	2	F32	M_AC_E_MONTH_IMP	Active energy monthly (import)	1	0		Wh		2.5.0
50	43098	2	F32	M_AC_P_DEMAND	Active Power Demand	1	0		W		2.5.0
51	43100	2	F32	M_AC_P_DEMAND_T1	Active Power Demand (Tariff 1)	1	0		W		2.5.0
52	43102	2	F32	M_AC_P_DEMAND_T2	Active Power Demand (Tariff 2)	1	0		W		2.5.0
53	43104	2	F32	M_AC_Q_DEMAND	Reactive Power Demand	1	0		VAr		2.5.0
54	43106	2	F32	M_AC_Q_DEMAND_T1	Reactive Power Demand (Tariff 1)	1	0		VAr		2.5.0
55	43108	2	F32	M_AC_Q_DEMAND_T2	Reactive Power Demand (Tariff 2)	1	0		VAr		2.5.0
56	43110	2	F32	M_AC_S_DEMAND	Apparent Power Demand	1	0		VA		2.5.0
57	43112	2	F32	M_AC_S_DEMAND_T1	Apparent Power Demand (Tariff 1)	1	0		VA		2.5.0
58	43114	2	F32	M_AC_S_DEMAND_T2	Apparent Power Demand (Tariff 2)	1	0		VA		2.5.0
59	43116	2	F32	M_AC_EQ_CAP_EXP_T1	Negative - Reactive Energy capacitive exported (Tariff 1)	1	0		VArh		2.5.0
60	43118	2	F32	M_AC_EQ_CAP_EXP_T2	Negative - Reactive Energy capacitive exported (Tariff 2)	1	0		VArh		2.5.0
61	43120	2	F32	M_AC_EQ_CAP_IMP_T1	Positive - Reactive Energy capacitive imported (Tariff 1)	1	0		VArh		2.5.0
62	43122	2	F32	M_AC_EQ_CAP_IMP_T2	Positive - Reactive Energy capacitive imported (Tariff 2)	1	0		VArh		2.5.0
63	43124	2	F32	M_AC_EQ_IND_EXP_T1	Positive - Reactive Energy inductive exported (Tariff 1)	1	0		VArh		2.5.0
64	43126	2	F32	M_AC_EQ_IND_EXP_T2	Positive - Reactive Energy inductive exported (Tariff 2)	1	0		VArh		2.5.0
65	43128	2	F32	M_AC_EQ_IND_IMP_T1	Positive - Reactive Energy inductive imported (Tariff 1)	1	0		VArh		2.5.0
66	43130	2	F32	M_AC_EQ_IND_IMP_T2	Positive - Reactive Energy inductive imported (Tariff 2)	1	0		VArh		2.5.0
67	43132	2	F32	M_AC_EQ_EXP	Reactive energy (export)	1	0		Varh		2.7.0
68	43134	2	F32	M_AC_EQ_IMP	Reactive energy (import)	1	0		Varh		2.7.0
69	43136	2	F32	M_AC_EQ_TOTAL	Reactive Energy total	1	0		Varh		2.10.0
70	43138	2	F32	M_AC_U_N	Zero phase voltage	1	0		V		2.14.0
71	43140	2	F32	M_AC_OT_TOTAL	Operation Time TOTAL	1	0		h		2.16.0
72	43200	2	F32	M_DC_P	Power DC	1	0		W		2.13.0
73	43202	2	F32	M_DC_U	Voltage DC	1	0		V		2.13.0
74	43204	2	F32	M_DC_I	Current DC	1	0		A		2.13.0
75	43206	2	F32	M_DC_E_EXP	Energy DC (export)	1	0		Wh		2.13.0
76	43208	2	F32	M_DC_E_IMP	Energy DC (import)	1	0		Wh		2.13.0
77	43210-43299	90			Reserved					Unused. 0xFFFF	
78	43300	2	F32	M_EV_E_EXP	Consumption of charging infrastructure	1	0		Wh		2.9.0
79	43302-43399	98			Reserved					Unused. 0xFFFF	
80	43400-43416	2	F32	M_AC_E_EXP_T1-9	Active energy for Tariff 1-9 (export)	1	0		Wh		2.11.0
81	43418-43419	2			Reserved					Unused. 0xFFFF	
82	43420-43436	2	F32	M_AC_E_IMP_T1-9	Active energy for Tariff 1-9 (import)	1	0		Wh		2.11.0
83	43438-43439	2			Reserved					Unused. 0xFFFF	

Index	Address	Length in registers	Datatype	Abbreviation	Description	Factor	Offset	Range	Unit	Comment	SCADA version
84	43440-43456	2	F32	M_AC_EQ_EXP_T1-9	Reactive energy for Tariff 1-9 (export)	1	0		VArh		2.11.0
85	43458-43459				Reserved					Unused. 0xFFFF	
86	43460-43476	2	F32	M_AC_EQ_IMP_T1-9	Reactive energy for Tariff 1-9 (import)	1	0		VArh		2.11.0
87	43478-43479				Reserved					Unused. 0xFFFF	
88	43480-43496	2	F32	M_AC_ES_EXP_T1-9	Apparent energy for Tariff 1-9 (export)	1	0		VAh		2.11.0
89	43498-43499	2			Reserved					Unused. 0xFFFF	
90	43500-43516	2	F32	M_AC_ES_IMP_T1-9	Apparent energy for Tariff 1-9 (import)	1	0		VAh		2.11.0

## String Monitoring

READ VALUES (Function Code 03)

Index	Address	Length in registers	Datatype	Abbreviation	Description	Factor	Offset	Range	Unit	Comment	SCADA version
1	44000	2	F32	P_DC	Power DC	1	0		W		1.0.0
2	44002	2	F32	U_DC	Voltage DC	1	0		V		1.0.0
3	44004	2	F32	I_SUM	Sum of currents	1	0		A		1.0.0
4	44006 - 44028	23			Reserved					Unused. 0xFFFF	
5	44029	1	U16	---	String Count	1	0	[1, 40]	-	String Count: number of strings	1.0.0
6	44030 - 44xxx		F32	I1-x	Current1-x				A	<b>Repeating Block:</b> Repeats for each string.  <b>Example:</b> String Count (Reg 44029) = 6  44030: I1 44032: I2 44034: I3 44036: I4 44038: I5 44040: I6	1.0.0

## Status DI internal

READ VALUES (Function Code 03)

The digital inputs can get addressed via the SCADA address 99.

Index	Address	Length in Registers	Datatype	Description	Factor/Offset	Comment	SCADA version
1	40000	1	U16	BM: DI-1	0	Values: 0x0000: Normal state 0x0001: Active state 0xFFFF: Not available	1.0.0
2	40001	1	U16	BM: DI-2	0		1.0.0
3	40002	1	U16	BM: DI-3	0		1.0.0
4	40003	1	U16	BM: DI-4	0		1.0.0
5	40004	1	U16	BM: MI-1	0		1.0.0
6	40005	1	U16	BM: MI-2	0		1.0.0
7	40006	1	U16	BM: MI-3	0		1.0.0
8	40007	1	U16	BM: MI-4	0		1.0.0
9	40008	1	U16	MX-1: MI-1	0		1.0.0
10	40009	1	U16	MX-1: MI-2	0		1.0.0
11	40010	1	U16	MX-1: MI-3	0		1.0.0
12	40011	1	U16	MX-1: MI-4	0		1.0.0
13	40012	1	U16	MX-2: MI-1	0		1.0.0
14	40013	1	U16	MX-2: MI-2	0		1.0.0
15	40014	1	U16	MX-2: MI-3	0		1.0.0
16	40015	1	U16	MX-2: MI-4	0		1.0.0
17	40016	1	U16	MX-3: MI-1	0		1.0.0
18	40017	1	U16	MX-3: MI-2	0		1.0.0
19	40018	1	U16	MX-3: MI-3	0		1.0.0
20	40019	1	U16	MX-3: MI-4	0		1.0.0
21	40020	1	U16	MX-4: MI-1	0		1.0.0
22	40021	1	U16	MX-4: MI-2	0		1.0.0
23	40022	1	U16	MX-4: MI-3	0		1.0.0
24	40023	1	U16	MX-4: MI-4	0		1.0.0
25	40024	1	U16	MX-5: MI-1	0		1.0.0
26	40025	1	U16	MX-5: MI-2	0		1.0.0
27	40026	1	U16	MX-5: MI-3	0		1.0.0
28	40027	1	U16	MX-5: MI-4	0		1.0.0

## Status DI external

READ VALUES (Function Code 03)

For reading of values from device "Status DI external" please see section "General Values".

## Digital Output

WRITE VALUES (Function Code 16)

The digital outputs can get addressed via the SCADA address 98.

Index	Address	Length in Registers	Datatype	Description	Factor/Offset	Comment	SCADA version
1	30000	1	U16	BM: DO-1	0	Please note: "digital Outputs" first need to be assigned via	2.12.0
2	30001	1	U16	BM: DO-2	0		2.12.0
3	30002	1	U16	BM: DO-3	0		2.12.0
4	30003	1	U16	BM: DO-4	0		2.12.0
5	30004	1	U16	MX-1: DO-1	0	Activation "SCADA interface" on blue'Log device configuration.	2.12.0
6	30005	1	U16	MX-1: DO-2	0		2.12.0
7	30006	1	U16	MX-1: DO-3	0		2.12.0
8	30007	1	U16	MX-1: DO-4	0		2.12.0
9	30008	1	U16	MX-2: DO-1	0	Commands: 0x0000 and 0x0001	2.12.0
10	30009	1	U16	MX-2: DO-2	0		2.12.0
11	30010	1	U16	MX-2: DO-3	0		2.12.0
12	30011	1	U16	MX-2: DO-4	0		2.12.0
13	30012	1	U16	MX-3: DO-1	0	Please note: The signal to activate a digital output via SCADA interface must get send regularly at least once per 60 seconds. If blue'Log doesn't receive a signal within 60 seconds the digital output will switch off.	2.12.0
14	30013	1	U16	MX-3: DO-2	0		2.12.0
15	30014	1	U16	MX-3: DO-3	0		2.12.0
16	30015	1	U16	MX-3: DO-4	0		2.12.0
17	30016	1	U16	MX-4: DO-1	0		2.12.0
18	30017	1	U16	MX-4: DO-2	0		2.12.0
19	30018	1	U16	MX-4: DO-3	0		2.12.0
20	30019	1	U16	MX-4: DO-4	0		2.12.0
21	30020	1	U16	MX-5: DO-1	0		2.12.0
22	30021	1	U16	MX-5: DO-2	0		2.12.0
23	30022	1	U16	MX-5: DO-3	0		2.12.0
24	30023	1	U16	MX-5: DO-4	0		2.12.0

## Tracker

READ VALUES via TCP port 503 (Function Code 03)

Index	Address	Length in registers	Datatype	Abbreviation	Description	Factor	Offset	Range	Unit	Comment	SCADA version
1	45000	2	F32	ELEVATION	Elevation	1	0		°		2.1.0
2	45002	2	F32	ELEVATION_TARGET	Elevation target value	1	0		°		2.1.0
3	45004	2	F32	ELEVATION_MANUAL	Elevation manually	1	0		°		2.1.0
4	45006	2	F32	AZIMUTH	Azimuth	1	0		°		2.1.0
5	45008	2	F32	AZIMUTH_TARGET	Azimuth target value	1	0		°		2.1.0
6	45010	2	F32	AZIMUTH_MANUAL	Azimuth manually	1	0		°		2.1.0

## Genset

### READ VALUES (Function Code 03)

Index	Address	Length in registers	Datatype	Abbreviation	Description	Factor	Offset	Range	Unit	Comment	SCADA version
1	47000	2	F32	P_AC	Power AC	1	0		W		2.8.0
2	47002	2	F32	Q_AC	Reactive Power	1	0		VAr		2.8.0
3	47004	2	F32	S_AC	Apparent power	1	0		VA		2.8.0
4	47006	2	F32	COS_PHI	Power factor (cos phi)	1	0		---		2.8.0
5	47008	2	F32	U_AC	Voltage AC	1	0		V		2.8.0
6	47010	2	F32	I_AC	Current AC	1	0		A		2.8.0
7	47012	2	F32	F_AC	Grid frequency	1	0		Hz		2.8.0
8	47014	2	F32	P_AC1	Power AC phase 1	1	0		W		2.8.0
9	47016	2	F32	P_AC2	Power AC phase 2	1	0		W		2.8.0
10	47018	2	F32	P_AC3	Power AC phase 3	1	0		W		2.8.0
11	47020	2	F32	Q_AC1	Reactive power phase 1	1	0		VAr		2.8.0
12	47022	2	F32	Q_AC2	Reactive power phase 2	1	0		VAr		2.8.0
13	47024	2	F32	Q_AC3	Reactive power phase 3	1	0		VAr		2.8.0
14	47026	2	F32	S_AC1	Apparent power phase 1	1	0		VA		2.8.0
15	47028	2	F32	S_AC2	Apparent power phase 2	1	0		VA		2.8.0
16	47030	2	F32	S_AC3	Apparent power phase 3	1	0		VA		2.8.0
17	47032	2	F32	COS_PHI1	Power factor (cos phi) phase 1	1	0		---		2.8.0
18	47034	2	F32	COS_PHI2	Power factor (cos phi) phase 2	1	0		---		2.8.0
19	47036	2	F32	COS_PHI3	Power factor (cos phi) phase 3	1	0		---		2.8.0
20	47038	2	F32	U_AC1	Voltage AC phase 1	1	0		V		2.8.0
21	47040	2	F32	U_AC2	Voltage AC phase 2	1	0		V		2.8.0
22	47042	2	F32	U_AC3	Voltage AC phase 3	1	0		V		2.8.0
23	47044	2	F32	U_AC_L1L2	Phase voltage L1L2	1	0		V		2.8.0
24	47046	2	F32	U_AC_L2L3	Phase voltage L2L3	1	0		V		2.8.0
25	47048	2	F32	U_AC_L3L1	Phase voltage L3L1	1	0		V		2.8.0
26	47050	2	F32	I_AC1	Current AC phase 1	1	0		A		2.8.0
27	47052	2	F32	I_AC2	Current AC phase 2	1	0		A		2.8.0
28	47054	2	F32	I_AC3	Current AC phase 3	1	0		A		2.8.0
29	47056	2	F32	F_AC1	Grid frequency phase 1	1	0		Hz		2.8.0
30	47058	2	F32	F_AC2	Grid frequency phase 2	1	0		Hz		2.8.0
31	47060	2	F32	F_AC3	Grid frequency phase 3	1	0		Hz		2.8.0
32	47062 - 47091	32			Reserved					Unused. 0xFFFF	
33	47092	2	F32	P_AC_SET_ABS	Absolute active power setpoint	1	0		W		2.9.0
34	47094	2	F32	P_AC_SET_REL	Relative active power setpoint	1	0		%		2.9.0
35	47096	2	F32	Q_AC_SET_ABS	Absolute reactive power setpoint	1	0		VAr		2.9.0
36	47098	2			Reserved					Unused. 0xFFFF	
37	47100	2	F32	E_TOTAL	Total yield	1	0		Wh		2.8.0
38	47102	2	F32	OT_TOTAL	Operation hours	1	0		h		2.8.0
39	47104	2	F32	OT_REMAINING	Operation hours remaining	1	0		h		2.8.0
40	47106 - 47109	4			Reserved					Unused. 0xFFFF	2.8.0
41	47110	2	F32	FUEL_CONSUMPTION	Fuel consumption	1	0		l/h		2.8.0
42	47112	2	F32	FUEL_REMAINING	Fuel remaining	1	0		%		2.8.0
43	47114	2	F32	FUEL EFFICIENCY	Fuel efficiency	1	0		Wh/l		2.8.0

## blue'Log

client-ID 97

Index	Address	Length in registers	Datatype	Function code	Abbreviation	Description	Factor	Offset	Range	Unit	Comment	SCADA version
1	10000	2	F32	FC3	P_AC_INV_SUM	Sum of all inverters Power AC				W	blue'Log XC as Master sums up also the inverters from the connected slaves	2.17.0