Symmetra MW
Modbus Data Points

Version 0.11.19

General Information:

There are two devices that constitute the Symmetra MW system: the UPS and the EBS. There is a separate point mapping for each device.
The tables below describe the data points mapping for each of the two devices. The columns show the following information:

- Address: The hex address of the modbus register
- Display Description: The name of the data item
- Valid Responses: The range of the data that can be provided when the register is queried. All responses will consist of 16-bit, unsigned integers
- Units: The units that the response data is given in.

The pin-out of the DB9F RS-485 port on the Symmetra MW Display is:

Pin 3: TD+
Pin 8: TD-
Pin 6: GND

Note: The RS-485 port is the DB9F located just above a DB9M port.

The Symmetra MW modbus interface can support modbus queries with the following restrictions:

- Only Modbus RTU is supported.
- Baud rates of 9600, 19200, 38400, 57600 and 115200 with parity settings of odd, even and none are supported.
- Only Read Input Register (modbus function code 4) requests are serviced.
- A maximum of 20 registers per request can be queried.
- Up to 5 requests per second can be serviced.

Modbus Data Points for Symmetra MW UPS:

In the following table, the valid responses are as follows unless otherwise stated:
0 = True (OK) state
1 = False (Alarmed) state

Address	Display Description	Valid Responses	Units
1. 0x00	Battery condition (not shown on display)	0 = good 1 = weak 2 = defect	
2. 0x01	Battery status (not shown on display)	0 = OK 1 = Low 2 = Depleted	
3. 0x02	Time on battery	0 – 65535 (if value exceeds 65535, then 65535 will be reported)	Seconds
4. 0x03	Runtime remaining	0 - 65535 (if value exceeds 65535, then 65535 will be reported)	Seconds
5. 0x04	Estimated charge time	0 – 9999	Minutes
6. 0x05	Estimated charge %	0 – 100	
7. 0x06	Battery 1 Voltage	0 – 9999	0.1 Vdc
8. 0x07	Battery 2 Voltage	0 – 9999	0.1 Vdc
9. 0x08	Total time on battery	0 to 65535 (if value exceeds 65535, then 65535 will be reported)	Minutes
10. 0x09	Total # of times on battery	0 to 65535 (if value exceeds 65535, then 65535 will be reported)	
11. 0x0A	Total active power (input)	0 to 9999	kW
12. 0x0B	Total apparent power (input)	0 to 9999	kVA
13. 0x0C	Frequency (input)	0 to 999	0.1 Hz
14. 0x0D	Power factor L1 (input)	0 to 100	.01 x power factor
15. 0x0E	Power factor L2 (input)	0 to 100	.01 x power factor
16. 0x0F	Power factor L3 (input)	0 to 100	.01 x power factor
17. 0x10	Voltage L1-2 (input)	0 to 9999	0.1 Vrms
18. 0x11	Voltage L2-3 (input)	0 to 9999	0.1 Vrms
19. 0x12	Voltage L3-1 (input)	0 to 9999	0.1 Vrms
20. 0x13	Current L1 (input)	0 to 9999	amps
21. 0x14	Current L2 (input)	0 to 9999	amps
22. 0x15	Current L3 (input)	0 to 9999	amps
23. 0x16	Active power L1 (input)	0 to 9999	kW
24. 0x17	Active power L2 (input)	0 to 9999	kW
25. 0x18	Active power L3 (input)	0 to 9999	kW
26. 0x19	Apparent power L1 (input)	0 to 9999	kVA
27. 0x1A	Apparent power L2 (input)	0 to 9999	kVA
28. 0x1B	Apparent power L3 (input)	0 to 9999	kVA
29. 0x1C	Current crest factor L1 (input)	0 to 500	0.01 x crest factor

30. 0x1D	Current crest factor L2 (input)	0 to 500	0.01 x crest factor
31. 0x1E	Current crest factor L3 (input)	0 to 500	0.01 x crest factor
32. 0x1F	Main SSW SCR Temperature	0 to 200	°C
33. 0x20	Main SSW SCR Temperature	0 to 200	°C
34. 0x21	Main SSW SCR Temperature	0 to 200	°C
35. 0x22	Average input phase-neutral voltage (not shown on display)	0 to 9999	0.1 Vrms
36. 0x23	Average input phase current (not shown on display)	0 to 9999	amps
37. 0x24	Nominal output rating	0 to 9999	kVA
38. 0x25	Total load	0 to 2500	0.1 %
39. 0x26	Total load high	0 to 2500	0.1 %
40. 0x27	Total active power (output)	0 to 9999	kW
41. 0x28	Total apparent power (output)	0 to 9999	kVA
42. 0x29	Frequency (output)	0 to 999	0.1 Hz
43. 0x2A	Power factor L1 (output)	0 to 100	.01 x power factor
44. 0x2B	Power factor L2 (output)	0 to 100	.01 x power factor
45. 0x2C	Power factor L3 (output)	0 to 100	.01 x power factor
46. 0x2D	Voltage L1-2 (output)	0 to 9999	0.1 Vrms
47. 0x2E	Voltage L2-3 (output)	0 to 9999	0.1 Vrms
48. 0x2F	Voltage L3-1 (output)	0 to 9999	0.1 Vrms
49. 0x30	Current L1 (output)	0 to 9999	amps
50. 0x31	Current L2 (output)	0 to 9999	amps
51. 0x32	Current L3 (output)	0 to 9999	amps
52. 0x33	Peak current L1 (output)	0 to 29999	amps
53. 0x34	Peak current L2 (output)	0 to 29999	amps
54. 0x35	Peak current L3 (output)	0 to 29999	amps
55. 0x36	Active power L1 (output)	0 to 9999	kW
56. 0x37	Active power L2 (output)	0 to 9999	kW
57. 0x38	Active power L3 (output)	0 to 9999	kW
58. 0x39	Apparent power L1 (output)	0 to 9999	kVA
59. 0x3A	Apparent power L2 (output)	0 to 9999	kVA
60. 0x3B	Apparent power L3 (output)	0 to 9999	kVA
61. 0x3C	Load L1	0 to 2500	0.1 %
62. 0x3D	Load L2	0 to 2500	0.1 %
63. 0x3E	Load L3	0 to 2500	0.1 %
64. 0x3F	Current crest factor L1 (output)	0 to 500	0.01 x crest factor
65. 0x40	Current crest factor L2 (output)	0 to 500	0.01 x crest factor
66. 0x41	Current crest factor L3 (output)	0 to 500	0.01 x crest factor
67. 0x42	Average output phase-neutral voltage (not shown on display)	0 to 9999	0.1 Vrms
68. 0x43	Charge DC capacitors	0 = charging off 1 = DC capacitors charging	
69. 0x44	Ambient temperature (not shown on display)	0 to 100	°C

70. 0x45	Switch gear status (shown graphically on display)	Bit mask For each bit, 0 = open, 1 = closed Bit 0 = Q1 Bit 1 = Q2 Bit 2 = Q3 Bit 3 = Q4 Bit 4 = Q5 Bit 5 = Q6 Bit 6 = MCCB1 Bit 7 = MCCB2 Bit 8-15 = Unused	
71. 0x46	Operation mode of the UPS (shown graphically on display)	0 = Normal mode (on line) 1 = UPS on Battery 2 = SSW Bypass 3 = UPS Off 4 = UPS performing a Self Test 5 = Manual Bypass / UPS in normal mode 6 = Manual Bypass / UPS is on Battery 7 = Manual Bypass / UPS is Off 8 = Manual Bypass / Static Bypass	
72. 0x47	Number of Alarms (alarms listed on display)	0 to 65535	
73. 0x48	Highest alarm severity (shown graphically on display)	0 = none 1 = informational 2 = warning 3 = critical	
74. 0x49	Parallel max total power percentage		0.1 %
75. 0x4A	Parallel total apparent load power		kVA
76. 0x4B	Parallel system operation mode	0 = Normal mode 1 = System on battery 2 = System in bypass 3 = System in manual bypass 4 = System off 5 = System is performing self test	
77. 0x4C	Total available apparent power		kVA
78. 0x4D	Not used		
79. 0x4E	Not used		
80. 0x4F	Not used		
81. 0x50	Not used		
82. 0x51	Not used		
83. 0x52	Not used		
84. 0x53	Not used		
85. 0x54	Not used		
86. 0x55	Not used		
87. 0x56	Not used		

88. 0x57	Not used		
89. 0x58	Not used		
90. 0x59	Not used		
91. 0x5A	Not used		
92. 0x5B	Not used		
93. 0x5C	Not used		
94. 0x5D	Not used		
95. 0x5E	Not used		
96. 0x5F	Not used		
97. 0x60	Not used		
98. 0x61	Not used		
99. 0x62	Not used		
100.0x63	Not used		
101.0x64	Not used		
102.0x65	Not used		
103.0x66	Not used		
104.0x67	Not used		
105.0x68	Not used		
106.0x69	Not used		
107.0x6A	Not used		
108.0x6B	Not used		
109.0x6C	Not used		
110.0x6D	Not used		
111.0x6E	Not used		
112.0x6F	Not used		
113.0x70	Not used		
114.0x71	Not used		
115.0x72	Not used		
116.0x73	Not used		
117.0x74	Not used		
118.0x75	Not used		
119.0x76	Not used		
120.0x77	Not used		
121.0x78	Not used		
122.0x79	Not used		
123.0x7A	Not used		
124.0x7B	Not used		
125.0x7C	Not used		
126.0x7D	Not used		
127.0x7E	Not used		
128.0x7F	Not used		
129.0x80	Not used		
130.0x81	Not used		
131.0x82	Not used		
132.0x83	Not used		

133.0x84	Not used		
134.0x85	Not used		
135.0x86	Not used		
136.0x87	Not used		
137.0x88	Not used		
138.0x89	Not used		
139.0x8A	Not used		
140.0x8B	Alarm battery temperature	0 = OK 1 = Over temperature 2 = Under temperature	
141.0x8C	Alarm positive battery circuit breaker open		
142.0x8D	Alarm negative battery circuit breaker open		
143.0x8E	Alarm low battery warning		
144.0x8F	Battery cubicle fuse fault		
145.0x90	Alarm high battery warning		
146.0x91	Alarm low DC shut down		
147.0x92	Alarm high DC shut down		
148.0x93	Alarm battery fault		
149.0x94	Alarm input fault	0 = OK 1 = Under voltage 2 = Over voltage	
150.0x95	Alarm synchronization error		
151.0x96	Alarm mains SSW fan fault	0 = Fan OK 1 = Fan weak 2 = Replace fan 3 = Fan fault	
152.0x97	Alarm input fuse fault		
153.0x98	Alarm input section fuse fault		
154.0x99	Alarm Input Fast Error Detected		
155.0x9A	Alarm Input Phase Sequence Error		
156.0x9B	Alarm output fault	0 = OK 1 = Under voltage 2 = Over voltage	
157.0x9C	Alarm output off		
158.0x9D	Alarm output fuse fault		
159.0x9E	Alarm output section fuse fault		
160.0x9F	Alarm bypass SSW fault		
161.0xA0	Alarm Bypass SSW fuse fault		
162.0xA1	Alarm inverter temperature fault		
163.0xA2	Alarm overload		
164.0xA3	Alarm inverter fan fault		
165.0xA4	Alarm inverter fuse fault		
166.0xA5	Alarm ambient temperature		
167.0xA6	Alarm bypass		
168.0xA7	Alarm MC to PMC comm fault		
169.0xA8	Alarm section fault		
170.0xA9	Alarm battery cubicle CAN I/O fault		
171.0xA	Alarm switch gear CAN I/O fault		

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172.0xAB	Alarm mains SSW fan CAN I/O fault		
173.0xAC	Alarm MC to display communication fault		
174.0xAD	Alarm crowbar triggered		
175.0xAE	Alarm Ground Fault Detector		
176.0xAF	Alarm top fan fault	0 = OK 1 = Fan Weak 2 = Replace Fan 3 = Fan Fault	
177.0xB0	Alarm main inverter peak current limiter activated		
178.0xB1	Alarm delta inverter peak current limiter activated		
179.0xB2	Alarm main PSU fault		
180.0xB3	Alarm main controller SELV PSU fault		
181.0xB4	Alarm power module PSU fault		
182.0xB5	Alarm main inverter current sense fault		
183.0xB6	Alarm PMC to power module communication fault		
184.0xB7	Alarm battery 1 fuse fault		
185.0xB8	Alarm battery 2 fuse fault		
186.0xB9	Alarm battery temperature sensor error		
187.0xBA	Alarm fast low DC shut down		
188.0xBB	Alarm main SSW SCR temperature fault		
189.0xBC	Alarm input contactor fault		
190.0xBD	Alarm input frequency fault		
191.0xBE	Alarm output contactor fault		
192.0xBF	Alarm output fast error detected		
193.0xC0	Alarm inverter AC input capacitors temperature		
194.0xC1	Alarm inverter AC output capacitors temperature		
195.0xC2	Alarm inverter DC capacitors temperature		
196.0xC3	Alarm power module choke temperature switch		
197.0xC4	Alarm power module heat-sink temperature switch		
198.0xC5	Alarm delta transformer temperature switch		
199.0xC6	Alarm section locked by section manager		
200.0xC7	Alarm switch gear earth fault		
201.0xC8	Alarm load disconnected		
202.0xC9	Alarm IgbtHigh status		
203.0xCA	Alarm IgbtLow status		
204.0xCB	Alarm IgbtDC status	0 = Switch OK 1 = DcHigh fault 2 = DcLow fault	
205.0xCC	Alarm section DC high		
206.0xCD	Alarm CBUS terminator fault		
207.0xCE	Alarm section disabled		
208.0xCF	Alarm discharging batteries		
209.0xD0	Alarm ABUS terminator fault		
210.0xD1	Alarm main controller isolated SELV PSU fault		

211.0xD2	Alarm parallel CAN communication error	0 = Parallel CAN comm. On cable 1 & 2 OK 1 = Parallel CAN comm. Fault on cable 1 2 = Parallel CAN comm. fault on cable 2 3 = Parallel CAN comm. fault on cable 1 and 2	
212.0xD3	Alarm normal and battery operation		
213.0xD4	Alarm UPS number error		
214.0xD5	Alarm No master present		
215.0xD6	Alarm parallel unit disabled		
216.0xD7	Alarm PBUS terminator fault	0 = PBUS Termination On cable 1 & 2 OK 1 = PBUS Termination Fault on cable 1 2 = PBUS Termination Fault on cable 2 3 = PBUS Termination Fault on cable 1 & 2	
217.0xD8	Alarm number of parallel UPSs		
218.0xD9	Alarm Main SSW SCR temperature sensor error		
219.0xDA	Alarm bypass sync. error		
220.0xDB	Alarm bypass fault	0 = OK 1 = Under voltage 2 = Over voltage	
221.0xDC	Alarm bypass SSW SCR fault		
222.0xDD	Alarm bypass SSW back-feed protection activated		
223.0xDE	Alarm SSW PSU fault		
224.0xDF	Alarm bypass input frequency fault		
225.0xE0	Alarm bypass fast error detected		
226.0xE1	Alarm relay board CAN I/O fault		
227.0xE2	Alarm AC capacitor bank fault	0 = AC cap. bank OK. 1 = AC cap. bank weak. 2 = Replace AC cap. bank. 3 = AC cap. bank fault	
228.0xE3	Alarm DC Capacitor bank fault	0 = AC cap. bank OK. 1 = AC cap. bank weak. 2 = Replace AC cap. bank. 3 = AC cap. bank fault	
229.0xE4	Alarm battery grounding error		
230.0xE5	Alarm input isolation transformer temperature		
231.0xE6	Alarm input frequency too low		
232.0xE7	Alarm input frequency too high		
233.0xE8	Alarm output isolation transformer temperature		
234.0xE9	Alarm output frequency too low		
235.0xEA	Alarm output frequency too high.		
236.0xEB	Alarm DC on output		
237.0xEC	Alarm bypass SSW SCR temperature fault		
238.0xED	Alarm parallel RS485 communication fault	0 = Parallel RS485 comm. fault	

		on cable 1& 2 OK. 1 = Parallel RS485 comm. Fault on cable 1 2 = Parallel RS485 comm. Fault on cable 1 3 = Parallel RS485 comm. fault on cable 1 & 2.	
239.0xEE	Alarm Ext. synchronization communication fault	0 = Ext. Bypass sync Comm. On cable 1 & 2 OK 1 = Ext. Bypass sync Comm. Fault on cable 1 2 = Ext. Bypass sync Comm. Fault on cable 2 3 = Ext. Bypass sync Comm. Fault on cable 1 & 2	
240.0xEF	Alarm ext. sync. source communication fault	0 = Ext. sync source Comm. on cable 1 & 2 OK 1 = Ext. sync source Comm. Fault on cable 1 2 = Ext. sync source Comm. Fault on cable 2 3 = Ext. sync source Comm. Fault on cable 1 & 2	
241.0xF0	Alarm emergency power off		
242.0xF1	Alarm delta transformer temperature		
243.0xF2	Alarm switch choke temperature		
244.0xF3	Alarm neutral bonding choke temperature fault		
245.0xF4	Alarm neutral bonding choke earth fault		
246.0xF5	Alarm CBUS RS485 communication lost		
247.0xF6	Alarm system forced to external sync. source		
248.0xF7	Alarm ambient temperature sensor fault		
249.0xF8	Alarm power module controller exceptions		
250.0xF9	Alarm main controller exceptions		
251.0xFA	Alarm system locked	0 = Lock released 1 = System locked in bypass operation 2 = System locked in battery operation	
252.0xFB	Alarm backfeed protection activated	0 = Backfeed protection not activated 1 = Backfeed protection activated	
253.0xFC	Alarm nominal system voltage configuration		
254.0xFD	Alarm nominal systems frequency configuration		
255.0xFE	Alarm inverter frame size configuration		
256.0xFF	Alarm nominal bypass voltage configuration		
257.0x100	Alarm nominal bypass frequency configuration		

258.0x101	Alarm firmware revision configuration		
259.0x102	Alarm bypass switch configuration		
260.0x103	Alarm number of UPSs configuration		
261.0x104	Alarm automatic restart configuration		

Modbus Data Points for Symmetra MW EBS (SSW):

In the following table, the valid responses are as follows unless otherwise stated:
0 = True (OK) state
1 = False (Alarmed) state

Address	Display Description	Valid Responses	Units
1. 0x00	Total load	0 to 2500	0.1 %
2. 0x01	Bypass power total	0 to 9999	kW
3. 0x02	Total apparent power	0 to 9999	kVA
4. 0x03	Frequency	0 to 999	0.1 Hz
5. 0x04	Power factor L1	0 to 100	.01 x power factor
6. 0x05	Power factor L2	0 to 100	.01 x power factor
7. 0x06	Power factor L3	0 to 100	.01 x power factor
8. 0x07	Voltage L1-2	0 to 9999	0.1 Vrms
9. 0x08	Voltage L2-3	0 to 9999	0.1 Vrms
10. 0x09	Voltage L3-1	0 to 9999	0.1 Vrms
11. 0x0A	Current L1	0 to 9999	amps
12. 0x0B	Current L2	0 to 9999	amps
13. 0x0C	Current L3	0 to 9999	amps
14. 0x0D	Peak current L1	0 to 29999	amps
15. 0x0E	Peak current L2	0 to 29999	amps
16. 0x0F	Peak current L3	0 to 29999	amps
17. 0x10	Active power L1	0 to 9999	kW
18. 0x11	Active power L2	0 to 9999	kW
19. 0x12	Active power L3	0 to 9999	kW
20. 0x13	Apparent power L1	0 to 9999	kVA
21. 0x14	Apparent power L2	0 to 9999	kVA
22. 0x15	Apparent power L3	0 to 9999	kVA
23. 0x16	Load L1	0 to 2500	0.1 %
24. 0x17	Load L2	0 to 2500	0.1 %
25. 0x18	Load L3	0 to 2500	0.1 %
26. 0x19	Current crest factor L1	0 to 500	0.01 x crest factor
27. 0x1A	Current crest factor L2	0 to 500	0.01 x crest factor
28. 0x1B	Current crest factor L3	0 to 500	0.01 x crest factor
29. 0x1C	Temperature Bypass SSW	0 to 200	°C
30. 0x1D	(highest of the three is	0 to 200	°C
31. 0x1E	displayed)	0 to 200	°C
32. 0x1F	State of breakers on external bypass SSW (shown graphically on display)	Bit mask For each bit, 0 = open, 1 = closed Bit 0 = Q1 Bit 1 = Q2 Bit 2 = Q3 Bit 3 = Q4 Bit 4 = Q5 Bit 5 = Q6 Bit 6 = MCCB1 Bit 7 = MCCB2 Bit 8-15 = Unused	

33. 0x20	State of lamps on external bypass SSW (not shown on display)	Bit mask For each bit, 0 = off, 1 = on Bit 0 = H2 Bit 1 = H3 Bit 2 = H4 Bit 3 = H7 Bit 4 = H8	
34. 0x21	Average Bypass phase-neutral voltage (not shown on display)	0 to 9999	0.1 Vrms
35. 0x22	Average Bypass phase current (not shown on display)	0 to 9999	amps
36. 0x23	Number of Alarms (alarms listed on display)	0 to 65535	
37. 0x24	Highest alarm severity (shown graphically on display)	0 = none 1 = informational 2 = warning 3 = critical	
38. 0x25	Parallel max total power percentage		0.1 %
39. 0x26	Parallel total apparent load power		kVA
40. 0x27	Parallel system operation mode	0 = Normal mode 1 = System on battery 2 = System in bypass 3 = System in manual bypass 4 = System off 5 = System is performing self test	
41. 0x28	Not used		
42. 0x29	Not used		
43. 0x2A	Not used		
44. 0x2B	Not used		
45. 0x2C	Not used		
46. 0x2D	Not used		
47. 0x2E	Not used		
48. 0x2F	Not used		
49. 0x30	Not used		
50. 0x31	Not used		
51. 0x32	Not used		
52. 0x33	Not used		
53. 0x34	Not used		
54. 0x35	Not used		
55. 0x36	Not used		
56. 0x37	Not used		
57. 0x38	Not used		
58. 0x39	Not used		
59. 0x3A	Not used		
60. 0x3B	Not used		
61. 0x3C	Not used		
62. 0x3D	Not used		
63. 0x3E	Not used		
64. 0x3F	Not used		
65. 0x40	Not used		
66. 0x41	Not used		
67. 0x42	Not used		
68. 0x43	Not used		
69. 0x44	Not used		

70. 0x45	Not used		
71. 0x46	Not used		
72. 0x47	Not used		
73. 0x48	Not used		
74. 0x49	Not used		
75. 0x4A	Not used		
76. 0x4B	Not used		
77. 0x4C	Not used		
78. 0x4D	Not used		
79. 0x4E	Not used		
80. 0x4F	Alarm Input Fast Error Detected		
81. 0x50	Alarm Input Phase Sequence Error		
82. 0x51	Alarm bypass sync. error		
83. 0x52	Alarm bypass fault	0 = OK 1 = Under voltage 2 = Over voltage	
84. 0x53	Alarm bypass SSW fan fault	0 = Fan OK 1 = Fan weak 2 = Replace fan 3 = Fan fault	
85. 0x54	Alarm bypass SSW fuse fault		
86. 0x55	Alarm bypass SSW backfeed protection activated		
87. 0x56	Alarm SSW PSU fault		
88. 0x57	Alarm bypass temperature fault		
89. 0x58	Alarm bypass SSW fan CAN I/O fault		
90. 0x59	Alarm switch gear CAN I/O fault		
91. 0x5A	Alarm MC to display communication fault		
92. 0x5B	Alarm main PSU 1 fault		
93. 0x5C	Alarm bypass input frequency fault		
94. 0x5D	Alarm bypass fast error detected		
95. 0x5E	Alarm main controller SELV PSU fault		
96. 0x5F	Alarm parallel CAN communication error	0 = Parallel CAN comm. On cable 1 & 2 OK 1 = Parallel CAN comm. Fault on cable 1 2 = Parallel CAN comm. fault on cable 2 3 = Parallel CAN comm. fault on cable 1 and 2	
97. 0x60	Alarm normal and battery operation		
98. 0x61	Alarm UPS number error		
99. 0x62	Alarm No master present		
100.0x63	Alarm parallel unit disabled		
101.0x64	Alarm PBUS terminator fault	0 = PBUS Termination On cable 1 & 2 OK 1 = PBUS Termination Fault on cable 1 2 = PBUS Termination Fault on cable 2 3 = PBUS Termination Fault on cable 1 & 2	
102.0x65	Alarm number of parallel UPSs		
103.0x66	Alarm bypass isolation transformer		

	temperature		
104.0x67	Alarm bypass SSW SCR fault		
105.0x68	Alarm bypass SSW fault		
106.0x69	Alarm bypass SSW SCR temperature sensor fault		
107.0x6A	Alarm bypass external sync. source fault		
108.0x6B	Alarm bypass external sync. source frequency fault		
109.0x6C	Alarm bypass external sync. source fast error detected.		
110.0x6D	Alarm parallel RS485 communication fault	0 = Parallel RS485 comm. fault on cable 1& 2 OK. 1 = Parallel RS485 comm. Fault on cable 1 2 = Parallel RS485 comm. Fault on cable 1 3 = Parallel RS485 comm. fault on cable 1 & 2.	
111.0x6E	Alarm Ext. synchronization communication fault	0 = Ext. Bypass sync Comm. On cable 1 & 2 OK 1 = Ext. Bypass sync Comm. Fault on cable 1 2 = Ext. Bypass sync Comm. Fault on cable 2 3 = Ext. Bypass sync Comm. Fault on cable 1 & 2	
112.0x6F	Alarm ext. sync. source communication fault	0 = Ext. sync source Comm. on cable 1 & 2 OK 1 = Ext. sync source Comm. Fault on cable 1 2 = Ext. sync source Comm. Fault on cable 2 3 = Ext. sync source Comm. Fault on cable 1 & 2	
113.0x70	Alarm emergency power off		
114.0x71	Alarm ABUS terminator fault		
115.0x72	Alarm main controller isolated SELV PSU fault		
116.0x73	Alarm main controller exceptions		
117.0x74	Alarm backfeed protection activated	0 = Backfeed protection not activated 1 = Backfeed protection activated	
118.0x75	Alarm nominal system voltage configuration		
119.0x76	Alarm nominal systems frequency configuration		
120.0x77	Alarm inverter frame size configuration		
121.0x78	Alarm nominal bypass voltage configuration		
122.0x79	Alarm nominal bypass frequency configuration		

123.0x7A	Alarm firmware revision configuration		
124.0x7B	Alarm bypass switch configuration		
125.0x7C	Alarm number of UPSs configuration		
126.0x7D	Alarm automatic restart configuration		