

SIGMA S6000 MODBUS Memory Map

Addr	Tag	Description	Parameter	Range	Data type	Read/Write	G1 / Addr 1	G2 / Addr 2	G1 / Addr 1	G1 / Addr 1
							Read	Read	1 Write	3 Write
Measurements										
1	U12	Phase 1-2 Voltage	0 - 65535 VAC	0 - 65535	Word	R	0	6		
2	U23	Phase 2-3 Voltage	0 - 65535 VAC	0 - 65535	Word	R	0	6		
3	U31	Phase 3-1 Voltage	0 - 65535 VAC	0 - 65535	Word	R	0	9		
4	U1N	Phase 1-N Voltage	0 - 65535 VAC	0 - 65535	Word	R	0	4		
5	U2N	Phase 2-N Voltage	0 - 65535 VAC	0 - 65535	Word	R	0	4		
6	U3N	Phase 3-N Voltage	0 - 65535 VAC	0 - 65535	Word	R	0	5		
7	I1	Phase 1 Current	0 - 6553.5 A	0 - 65535	Word	R	0.30	0.00		
8	I2	Phase 2 Current	0 - 6553.5 A	0 - 65535	Word	R	0.00	0.00		
9	I3	Phase 3 Current	0 - 6553.5 A	0 - 65535	Word	R	0.00	0.00		
10	Iactive1	Phase 1 Active Current	0 - 6553.5 A	0 - 65535	Word	R	0.00	0.00		
11	Iactive2	Phase 2 Active Current	0 - 6553.5 A	0 - 65535	Word	R	0.00	0.00		
12	Iactive3	Phase 3 Active Current	0 - 6553.5 A	0 - 65535	Word	R	0.00	0.00		
13	P1	Phase 1 Active Power	0 - 65535 W	0 - 65535	Word	R	0	0		
14	P2	Phase 2 Active Power	0 - 65535 W	0 - 65535	Word	R	0	0		
15	P3	Phase 3 Active Power	0 - 65535 W	0 - 65535	Word	R	0	0		
16	P	Active Power	0 - 65535 W	0 - 65535	Word	R	0	0		
17	Ireactive1	Phase 1 Reactive Current	0 - 6553.5 A	0 - 65535	Word	R	0.00	0.00		
18	Ireactive2	Phase 2 Reactive Current	0 - 6553.5 A	0 - 65535	Word	R	0.00	0.00		
19	Ireactive3	Phase 3 Reactive Current	0 - 6553.5 A	0 - 65535	Word	R	0.00	0.00		
20	Q1	Phase 1 Reactive Power	0 - 65535 VAr	0 - 65535	Word	R	0	0		
21	Q2	Phase 2 Reactive Power	0 - 65535 VAr	0 - 65535	Word	R	0	0		
22	Q3	Phase 3 Reactive Power	0 - 65535 VAr	0 - 65535	Word	R	0	0		
23	Q	Reactive Power	0 - 65535 VAr	0 - 65535	Word	R	0	0		
24	PF1	Phase 1 Power Factor	0 - 9.999	0 - 9999	Word	R	0.000	0.000		
25	PF2	Phase 2 Power Factor	0 - 9.999	0 - 9999	Word	R	0.000	0.000		
26	PF3	Phase 3 Power Factor	0 - 9.999	0 - 9999	Word	R	0.000	0.000		
27	PF	Power Factor	0 - 9.999	0 - 9999	Word	R	0.000	0.000		
28	VA1	Apparent Power 1	0 - 65535 VA	0 - 65535	Word	R	0	0		
29	VA2	Apparent Power 2	0 - 65535 VA	0 - 65535	Word	R	0	0		
30	VA3	Apparent Power 3	0 - 65535 VA	0 - 65535	Word	R	0	0		
31	VA	System Apparent Power	0 - 65535 VA	0 - 65535	Word	R	0	0		
32	Freq	Frequency	0 - 999.9 Hz	0 - 9999	Word	R	0.0	0.0		
33	CBClosed	Circuit Breaker Closed	0 - 1	0 - 1	Word	R	0	0		
Protection Status										
50	SCTrip	Short Circuit Trip	0 - 1	0 - 1	Word	R				
51	OCtrip	Over Current Trip	0 - 1	0 - 1	Word	R				
52	OLTrip	Over Load Trip	0 - 1	0 - 1	Word	R				
53	RPTrip	Reverse Power Trip	0 - 1	0 - 1	Word	R				
54	ELTrip	Excitation Loss Trip	0 - 1	0 - 1	Word	R				
55	VEUpperTrip	Voltage Establish Upper Trip	0 - 1	0 - 1	Word	R				
56	VELowerTrip	Voltage Establish Lower Trip	0 - 1	0 - 1	Word	R				
57	FUpperTrip	Frequency Establish Upper Trip	0 - 1	0 - 1	Word	R				
58	FELowerTrip	Frequency Establish Lower Trip	0 - 1	0 - 1	Word	R				
Error Status										
59	CBClosedError	Circuit Breaker Closed Error	0 - 1	0 - 1	Word	R				
60	CBTripError	Circuit Breaker Trip Error	0 - 1	0 - 1	Word	R				
61	AbnormalTripError	Abnormal Trip Error	0 - 1	0 - 1	Word	R				
62										
Fault Status										
69	Powersupply1Fault	Powersupply 1 Fault	0 - 1	0 - 1	Word	R				
70	Powersupply2Fault	Powersupply 2 Fault	0 - 1	0 - 1	Word	R				
71	CanbusFault	Canbus Fault	0 - 1	0 - 1	Word	R				
72	MHFault	Measurehead Fault	0 - 1	0 - 1	Word	R				
73										
74	IntSyncFault	Internal Sync Fault	0 - 1	0 - 1	Word	R				
75										
76	CTWireFault	CT Wire Fault	0 - 1	0 - 1	Word	R				
77										
78										
79										
LED Status										
80	LEDOffMask	LED On/Off Status	Bit mask	-	Word	R	3	3		
		Bit 0 = Primary Supply								
		Bit 1 = Backup Supply								
		Bit 2 = SC Protection								
		Bit 3 = OC Protection								
		Bit 4 = OL Protection								
		Bit 5 = RP Protection								
		Bit 6 = EL Protection								
		Bit 7 = VE Protection								
		Bit 8 = Voltage OK								
		Bit 9 = Phase OK								
		Bit 10 = C/B Closed								
		Bit 11 = C/B Trip								
		Bit 12 = NE1								
		Bit 13 = NE2								
		Bit 14 = Alarm								
81	LEDFlashMask	LED Flash Status	Bit mask	-	Word	R	0	0		
		Bit 0 = Primary Supply								
		Bit 1 = Backup Supply								
		Bit 2 = SC Protection								

		Bit 3 = OC Protection							
		Bit 4 = OL Protection							
		Bit 5 = RP Protection							
		Bit 6 = EL Protection							
		Bit 7 = VE Protection							
		Bit 8 = Voltage OK							
		Bit 9 = Phase OK							
		Bit 10 = C/B Closed							
		Bit 11 = C/B Trip							
		Bit 12 = NE1							
		Bit 13 = NE2							
		Bit 14 = Alarm							
Input Status									
82	InputMask	Input Status	Bit mask	-	Word	R	0	0	
		Bit 0 = C/B Reset							
		Bit 1 = C/B Closed							
		Bit 2 = NE Reset							
Relay Status									
84	RelayMask	Relay Status	Bit mask	-	Word	R	0	1	
		Bit 0 = C/B Trip							
		Bit 1 = NE1 Trip							
		Bit 2 = NE2 Trip							
		Bit 3 = Alarm							
Alarm Status									
89	AlarmMask	Alarm Error Status	Bit mask	-	Word	R	0	0	
		Bit 0 = Primary Supply							
		Bit 1 = Backup Supply							
		Bit 2 = Unused							
		Bit 3 = Measure Head							
		Bit 4 = Unused							
		Bit 5 = Sync. Int. Signal							
		Bit 6 = Unused							
		Bit 7 = Main Loop							
Configuration									
100	SCEnabled	Short-Circuit Protection Enabled	Index	0 - 1	Word	RW	0	0	0
		0 = No							
		1 = Yes							
101	SCLevel	Short-Circuit Protection Level	100 - 400 %	100 - 400	Word	RW	250	250	300
102	SCDelay	Short-Circuit Protection Delay	100 - 1000 ms	100 - 1000	Word	RW	100	100	100
103	PreSCDelay	Pre-Short-Circuit Protection Delay	100 - 1000 ms	100 - 1000	Word	RW	100	100	100
104									
105									
106									
107									
108	OCEnabled	Overcurrent Protection Enabled	Index	0 - 1	Word	RW	1	1	0
		0 = No							
		1 = Yes							
109	OCLLevel	Overcurrent Protection Level	50 - 140 %	50 - 140	Word	RW	100	100	100
110	OCDelay	Overcurrent Protection Delay	0.1 - 30.0 s	1 - 300	Word	RW	5.0	5.0	5.0
111	PreOCDelay	Pre-Overcurrent Protection Delay	0.1 - 30.0 s	1 - 300	Word	RW	5.0	5.0	5.0
112									
113									
114									
115									
116	OLEnabled	Overload Protection Enabled	Index	0 - 1	Word	RW	1	1	0
		0 = No							
		1 = Yes							
117	OLLLevel	Overload Protection Level	50 - 140 %	50 - 140	Word	RW	100	100	100
118	OLDelay	Overload Protection Delay	2.0 - 20.0 s	20 - 200	Word	RW	5.0	5	5.0
119	PreOLDelay	Pre-Overload Protection Delay	2.0 - 20.0 s	20 - 200	Word	RW	2.0	5	5.0
120	OLMode	Overload Mode	Index	0 - 1	Word	RW	0	0	0
		0 = Phase							
		1 = Sum							
121									
122									
123									
124									
125	RPEnabled	Reverse Power Protection Enabled	Index	0 - 1	Word	RW	1	1	
		0 = No							
		1 = Yes							
126	RPLLevel	Reverse Power Protection Level	0 - -20 %	0 - 20	Word	RW	-20	-200	
127	RPDelay	Reverse Power Protection Delay	2.0 - 20.0 s	20 - 200	Word	RW	50	50	
128	PreRPDelay	Pre-Reverse Power Protection Delay	2.0 - 20.0 s	20 - 200	Word	RW	50	50	
129	RPMMode	Reverse Power Mode	Index	0 - 1	Word	RW	0	0	
		0 = Phase							
		1 = Sum							
130									
131									
132									
133									
134	ELEnabled	Excitation Loss Protection Enabled	Index	0 - 1	Word	RW	1	1	
		0 = No							
		1 = Yes							
135	ELLevel	Excitation Loss Protection Level	0 - -150 %	0 - 150	Word	RW	-50	-50	
136	ELDDelay	Excitation Loss Protection Delay	2.0 - 20.0 s	20 - 200	Word	RW	50	50	
137	PreELDDelay	Pre-Excitation Loss Protection Delay	2.0 - 20.0 s	20 - 200	Word	RW	50	50	
138	ELMode	Excitation Loss Mode	Index	0 - 1	Word	RW	0	0	

		0 = Phase 1 = Sum							
139									
140									
141									
142									
143	VEEnabled	Volt. Establish. Protection Enabled 0 = No 1 = Yes	Index	0 - 1	Word	RW	0	0	
144	VELowLevel	Volt. Establish. Protection Lower Level	50 - 100 %	50 - 100	Word	RW	70	70	
145	VEUpLevel	Volt. Establish. Protection Upper Level	100 - 150 %	100 - 150	Word	RW	130	130	
146	VEDelay	Volt. Establish. Protection Delay	1.0 - 30.0 s	10 - 300	Word	RW	20	20	
147	PreVEDelay	Pre-Volt. Establish. Protection Delay	1.0 - 30.0 s	10 - 300	Word	RW	20	20	
148	FEEnabled	Freq. Establish. Protection Enabled 0 = No 1 = Yes	Index	0 - 1	Word	RW	0	0	
149	FELowLevel	Freq. Establish. Protection Lower Level	50 - 100 %	50 - 100	Word	RW	70	70	
150	FEUpLevel	Freq. Establish. Protection Upper Level	100 - 150 %	100 - 150	Word	RW	130	130	
151	FEDelay	Freq. Establish. Protection Delay	1.0 - 30.0 s	10 - 300	Word	RW	20	20	
152	PreFEDelay	Pre-Freq. Establish. Protection Delay	1.0 - 30.0 s	10 - 300	Word	RW	20	20	
153	NE1Enabled	NE1 Load Trip Enabled 0 = No 1 = Yes	Index	0 - 1	Word	RW	1	1	
154	NE1Param	NE1 Load Trip Parameter 0 = Frequency 1 = Load 2 = Current	Index	0 - 2	Word	RW	0	0	
155	NE1Level	NE1 Load Trip Level	20 - 150 %	20 - 150	Word	RW	80	80	
156	NE1Hyst	NE1 Hysteresis	1 - 100 %	1 - 100	Word	RW	10	10	
157	NE1Delay	NE1 Load Trip Delay	1.0 - 60.0 s	10 - 600	Word	RW	100	100	
158	NE1Mode	NE1 Load Trip Mode 0 = Phase 1 = Sum	Index	0 - 1	Word	RW	0	0	
159									
160									
161	NE2Enabled	NE2 Load Trip Enabled 0 = No 1 = Yes	Index	0 - 1	Word	RW	1	1	
162	NE2Param	NE2 Load Trip Parameter 0 = Frequency 1 = Load 2 = Current	Index	0 - 2	Word	RW	0	0	
163	NE2Level	NE2 Load Trip Level	20 - 150 %	20 - 150	Word	RW	90	90	
164	NE2Hyst	NE2 Hysteresis	1 - 100 %	1 - 100	Word	RW	10	10	
165	NE2Delay	NE2 Load Trip Delay	1.0 - 60.0 s	10 - 600	Word	RW	100	100	
166	NE2Mode	NE2 Load Trip Mode 0 = Phase 1 = Sum	Index	0 - 1	Word	RW	0	0	
167									
168									
169	AlarmRelayProtection	Alarm Relay Protection	Index	0 - 1	Word	RW	0	0	
170	CBTripContact	C/B Trip Relay Normal State 0 = Normally Deenergized (ND) 1 = Normally Energized (NE)	Index	0 - 1	Word	RW	0	1	
171									
172	NE1TripContact	NE1 Relay Normal State 0 = Normally Deenergized (ND) 1 = Normally Energized (NE)	Index	0 - 1	Word	RW	0	0	
173	NE1TripLatch	NE1 Relay Latch Function 0 = No Latch 1 = Latch	index	0 - 1	Word	RW	1	1	
174									
175	NE2TripContact	NE2 Relay Normal State 0 = Normally Deenergized (ND) 1 = Normally Energized (NE)	Index	0 - 1	Word	RW	0	0	
176	NE2TripLatch	NE2 Relay Latch Function 0 = No Latch 1 = Latch	Index	0 - 1	Word	RW	1	1	
177									
178	UnloadTrip	Unload Trip Signal 0 = CB Trip Relay 1 = Aux I/O 2	index	0 - 1	Word	RW	0	0	
179									
180									
181									
182									
183	Out1Src	Output 1 Source 0 = U12 1 = U23 2 = U31 3 = U1N 4 = U2N 5 = U3N 6 = I1 7 = I2 8 = I3 9 = Iactive1	Index	0 - 31	Word	RW	15	15	

		10 = Iactive2						
		11 = Iactive3						
		12 = P1						
		13 = P2						
		14 = P3						
		15 = P						
		16 = Ireactive1						
		17 = Ireactive2						
		18 = Ireactive3						
		19 = Q1						
		20 = Q2						
		21 = Q3						
		22 = Q						
		23 = PF1						
		24 = PF2						
		25 = PF3						
		26 = PF						
		27 = VA1						
		28 = VA2						
		29 = VA3						
		30 = VA						
		31 = Freq						
184	Out1Signal	Output 1 Signal	Index	0 - 1	Word	RW	0	0
		0 = Voltage						
		1 = Current						
185	Out1SrcMin	Output 1 Source Min.	-1000.0 - 1000.0 %	-10000 - 10000	Word	RW	0	0
186	Out1SrcMax	Output 1 Source Max.	-1000.0 - 1000.0 %	-10000 - 10000	Word	RW	100	100
187	Out1VoltMin	Output 1 Voltage Min.	-10.000 - 10.000 VDC	-10000 - 10000	Word	RW	-1	-1
188	Out1VoltMax	Output 1 Voltage Max.	-10.000 - 10.000 VDC	-10000 - 10000	Word	RW	10	10
189	Out1CurMin	Output 1 Current Min.	0.000 - 24.000 mA	0 - 24000	Word	RW	4	4
190	Out1CurMax	Output 1 Current Max.	0.000 - 24.000 mA	0 - 24000	Word	RW	20	20
191								
192								
193								
194								
195								
196	Out2Src	Output 2 Source	Index	0 - 31	Word	RW	22	22
		0 = U12						
		1 = U23						
		2 = U31						
		3 = U1N						
		4 = U2N						
		5 = U3N						
		6 = I1						
		7 = I2						
		8 = I3						
		9 = Iactive1						
		10 = Iactive2						
		11 = Iactive3						
		12 = P1						
		13 = P2						
		14 = P3						
		15 = P						
		16 = Ireactive1						
		17 = Ireactive2						
		18 = Ireactive3						
		19 = Q1						
		20 = Q2						
		21 = Q3						
		22 = Q						
		23 = PF1						
		24 = PF2						
		25 = PF3						
		26 = PF						
		27 = VA1						
		28 = VA2						
		29 = VA3						
		30 = VA						
		31 = Freq						
197	Out2Signal	Output 2 Signal	Index	0 - 1	Word	RW	0	0
		0 = Voltage						
		1 = Current						
198	Out2SrcMin	Output 2 Source Min.	-1000.0 - 1000.0 %	-10000 - 10000	Word	RW	0	0
199	Out2SrcMax	Output 2 Source Max.	-1000.0 - 1000.0 %	-10000 - 10000	Word	RW	100	100
200	Out2VoltMin	Output 2 Voltage Min.	-10.000 - 10.000 VDC	-10000 - 10000	Word	RW	-1	-1
201	Out2VoltMax	Output 2 Voltage Max.	-10.000 - 10.000 VDC	-10000 - 10000	Word	RW	10	10
202	Out2CurMin	Output 2 Current Min.	0.000 - 24.000 mA	0 - 24000	Word	RW	4	4
203	Out2CurMax	Output 2 Current Max.	0.000 - 24.000 mA	0 - 24000	Word	RW	20	20
204								
205								
206								
207								
208								
209	Out3Src	Output 3 Source	Index	0 - 31	Word	RW	26	26
		0 = U12						
		1 = U23						
		2 = U31						

		3 = U1N						
		4 = U2N						
		5 = U3N						
		6 = I1						
		7 = I2						
		8 = I3						
		9 = Iactive1						
		10 = Iactive2						
		11 = Iactive3						
		12 = P1						
		13 = P2						
		14 = P3						
		15 = P						
		16 = Ireactive1						
		17 = Ireactive2						
		18 = Ireactive3						
		19 = Q1						
		20 = Q2						
		21 = Q3						
		22 = Q						
		23 = PF1						
		24 = PF2						
		25 = PF3						
		26 = PF						
		27 = VA1						
		28 = VA2						
		29 = VA3						
		30 = VA						
		31 = Freq						
210	Out3Signal	Output 3 Signal	Index	0 - 1	Word	RW	0	0
		0 = Voltage						
		1 = Current						
211	Out3SrcMin	Output 3 Source Min.	-1000.0 - 1000.0 %	-10000 - 10000	Word	RW	0	0
212	Out3SrcMax	Output 3 Source Max.	-1000.0 - 1000.0 %	-10000 - 10000	Word	RW	100	100
213	Out3VoltMin	Output 3 Voltage Min.	-10.000 - 10.000 VDC	-10000 - 10000	Word	RW	0	0
214	Out3VoltMax	Output 3 Voltage Max.	-10.000 - 10.000 VDC	-10000 - 10000	Word	RW	10	10
215	Out3CurMin	Output 3 Current Min.	0.000 - 24.000 mA	0 - 24000	Word	RW	4	4
216	Out3CurMax	Output 3 Current Max.	0.000 - 24.000 mA	0 - 24000	Word	RW	20	20
217								
218								
219								
220								
221								
222	NormVoltage	Nominal Voltage	63.0 - 690.0 VAC	630 - 6900	Word	RW	400	400
223	PrimVoltage	Primary Voltage	63 - 32000 VAC	63 - 32000	Word	RW	400	400
224	GenMaxCur	Generator Max Current	0.5 - 3000.0 A	5 - 30000	Word	RW	60.59999847	60.59999847
225	CTPrimCur	Primary CT Current	5 - 3000.0 A	50 - 30000	Word	RW	100	100
226	RatedFreq	Rated Frequency	35.0 - 500.0 Hz	350 - 5000	Word	RW	50	50
227	Neutral	Neutral Connection	Index	0 - 1	Word	RW	0	0
		0 = No						
		1 = Yes						
228	LoadCalc	Load Calculation	Index	0 - 1	Word	RW	0	0
		0 = Current						
		1 = Load						
229	VoltOKWnd	Voltage OK Window	0 - 20 %	0 - 20	Word	RW	10	10
230	CosPhi	CosPhi	0 - 100	0 - 100	Word	RW	0	0
231								
232								
233	RS232BaudRate	RS232 Baud Rate	Index	0 - 4	Word	RW	3	3
		0 = 1200						
		1 = 2400						
		2 = 4800						
		3 = 9600						
		4 = 19200						
234	RS232Parity	RS232 Parity	Index	0 - 2	Word	RW	0	0
		0 = None						
		1 = Even						
		2 = Odd						
235	RS232DataBits	RS232 Data Bits	Index	0 - 1	Word	RW	1	1
		0 = 7						
		1 = 8						
236	RS232StopBits	RS232 Stop Bits	Index	0 - 1	Word	RW	0	0
		0 = 1						
		1 = 2						