MODBUS POINT MAP

All Variables are in integer format.

Int	R/W	NV	Description
Registers 1-42 are in milliamps (10000 = 10.000Amps)			
1	R		Current, Channel 1
2	R		Current, Channel 2
3	R		Current, Channel 3
4	R		Current, Channel 4
5	R		Current, Channel 5
6	R		Current, Channel 6
7	R		Current, Channel 7
8	R		Current, Channel 8
9	R		Current, Channel 9
10	R		Current, Channel 10
11	R		Current, Channel 11
12	R		Current, Channel 12
13	R		Current, Channel 13
14	R		Current, Channel 14
15	R		Current, Channel 15
16	R		Current, Channel 16
17	R		Current, Channel 17
18	R		Current, Channel 18
19	R		Current, Channel 19
20	R		Current, Channel 20
21	R		Current, Channel 21
22	R		Current, Channel 22
23	R		Current, Channel 23
24	R		Current, Channel 24
25	R		Current, Channel 25
26	R		Current, Channel 26
27	R		Current, Channel 27
28	R		Current, Channel 28
29	R		Current, Channel 29
30	R		Current, Channel 30
31	R		Current, Channel 31
32	R		Current, Channel 32
33	R		Current, Channel 33
34	R		Current, Channel 34
35	R		Current, Channel 35
36	R		Current, Channel 36
37	R		Current, Channel 37
38	R		Current, Channel 38
39	R		Current, Channel 39
40	R		Current, Channel 40
41	R		Current, Channel 41
42	R		Current, Channel 42

Int	R/W	NV	Description
43	R	NV	Global Warning/Critical Alarm Registers

This register provides a quick status of alarms for the unit. A bit in this register is set if any bit in the indicated register is set.

bit 0: Warning Register 1
bit 1: Warning Register 2
bit 2: Warning Register 3
bit 3: Critical Register 1
bit 4: Critical Register 2
bit 5: Critical Register 3
bit 6: Error Register
bits 7-15: Always read as 0

The following Warning Registers set a bit for every channel which reads a current above the Warning Threshold but below the Critical Threshold for at least the Warning Time-Delay. All alarms are latching and must be reset by the controller. To reset any alarm, read the register and then write the register with the desired alarm bit cleared.

44 R/W NV Warning Register 1

bit 0: Channel 1
bit 1: Channel 2
bit 2: Channel 3
bit 3: Channel 4
bit 4: Channel 5
bit 5: Channel 6
bit 6: Channel 7
bit 7: Channel 8
bit 8: Channel 9
bit 9: Channel 10
bit 10: Channel 11
bit 11: Channel 12
bit 12: Channel 13
bit 13: Channel 14
bit 14: Channel 15
bit 15: Channel 16

#	R/W	NV	Description
45	R/W	NV	Warning Register 2 bit 0: Channel 17 bit 1: Channel 18 bit 2: Channel 19 bit 3: Channel 20 bit 4: Channel 21 bit 5: Channel 22 bit 6: Channel 23 bit 7: Channel 24 bit 8: Channel 25 bit 9: Channel 26 bit 10: Channel 27 bit 11: Channel 28 bit 12: Channel 29 bit 13: Channel 30 bit 14: Channel 31 bit 15: Channel 32
46	R/W	NV	Warning Register 3 bit 0: Channel 33 bit 1: Channel 34 bit 2: Channel 35 bit 3: Channel 36 bit 4: Channel 37 bit 5: Channel 38 bit 6: Channel 39 bit 7: Channel 40 bit 8: Channel 41 bit 9: Channel 42 bits 10-15: Always read as 0

The following Critical Registers set a bit for every channel which reads a current above the Critical Threshold for at least the Critical Time-Delay. All alarms are latching and must be reset by the controller. To reset any alarm, read the register and then write the register with the desired alarm bit cleared.

47	R/W	NV	Critical Alarm Register 1 bit 0: Channel 1 bit 1: Channel 2 bit 2: Channel 3 bit 3: Channel 4 bit 4: Channel 5 bit 5: Channel 6 bit 6: Channel 7 bit 7: Channel 8 bit 8: Channel 9 bit 9: Channel 10 bit 10: Channel 11 bit 11: Channel 12 bit 12: Channel 13 bit 13: Channel 14 bit 14: Channel 15 bit 15: Channel 16

#	R/W	NV	Description
48	R/W	NV	Critical Alarm Register 2 bit 0: Channel 17 bit 1: Channel 18 bit 2: Channel 19 bit 3: Channel 20 bit 4: Channel 21 bit 5: Channel 22 bit 6: Channel 23 bit 7: Channel 24 bit 8: Channel 25 bit 9: Channel 26 bit 10: Channel 27 bit 11: Channel 28 bit 12: Channel 29 bit 13: Channel 30 bit 14: Channel 31 bit 15: Channel 32
49	R/W	NV	Critical Alarm Register 3 bit 0: Channel 33 bit 1: Channel 34 bit 2: Channel 35 bit 3: Channel 36 bit 4: Channel 37 bit 5: Channel 38 bit 6: Channel 39 bit 7: Channel 40 bit 8: Channel 41 bit 9: Channel 42 bits 10-15: Always read as 0
50	R	NV	Firmware Version
51	R	NV	Firmware Revision

#	R/W	NV	Description

The following Breaker Size registers set the capacity of each breaker for the alarms. These settings should match the CT with its associated breaker's rating. Units are in Amps (10 = 10Amps). Range = 10 to 50. Defaults are all set to 20.

52	R/W	NV	Breaker Size Channel 1
53	R/W	NV	Breaker Size Channel 2
54	R/W	NV	Breaker Size Channel 3
55	R/W	NV	Breaker Size Channel 4
56	R/W	NV	Breaker Size Channel 5
57	R/W	NV	Breaker Size Channel 6
58	R/W	NV	Breaker Size Channel 7
59	R/W	NV	Breaker Size Channel 8
60	R/W	NV	Breaker Size Channel 9
61	R/W	NV	Breaker Size Channel 10
62	R/W	NV	Breaker Size Channel 11
63	R/W	NV	Breaker Size Channel 12
64	R/W	NV	Breaker Size Channel 13
65	R/W	NV	Breaker Size Channel 14
66	R/W	NV	Breaker Size Channel 15
67	R/W	NV	Breaker Size Channel 16
68	R/W	NV	Breaker Size Channel 17
69	R/W	NV	Breaker Size Channel 18
70	R/W	NV	Breaker Size Channel 19
71	R/W	NV	Breaker Size Channel 20
72	R/W	NV	Breaker Size Channel 21
73	R/W	NV	Breaker Size Channel 22
74	R/W	NV	Breaker Size Channel 23
75	R/W	NV	Breaker Size Channel 24
76	R/W	NV	Breaker Size Channel 25
77	R/W	NV	Breaker Size Channel 26
78	R/W	NV	Breaker Size Channel 27
79	R/W	NV	Breaker Size Channel 28
80	R/W	NV	Breaker Size Channel 29
81	R/W	NV	Breaker Size Channel 30
82	R/W	NV	Breaker Size Channel 31
83	R/W	NV	Breaker Size Channel 32
84	R/W	NV	Breaker Size Channel 33
85	R/W	NV	Breaker Size Channel 34
86	R/W	NV	Breaker Size Channel 35
87	R/W	NV	Breaker Size Channel 36
88	R/W	NV	Breaker Size Channel 37
89	R/W	NV	Breaker Size Channel 38
90	R/W	NV	Breaker Size Channel 39
91	R/W	NV	Breaker Size Channel 40
92	R/W	NV	Breaker Size Channel 41
93	R/W	NV	Breaker Size Channel 42

#	R/W	NV	Description

The following Warning Threshold registers set the thresholds for the Warning alarms as a percentage of the breaker size registers (52-93). A Warning alarm will occur if the measured current is above the Warning Threshold but below the Critical alarm Threshold for at least the Warning Time Delay. Units are in percent (75 = 75%). Range is 0-100. Default setting is 60%. Note that a Warning will not always be generated if the current instantaneously jumps from below the Warning Threshold to above the Critical alarm Threshold.

94	R/W	NV	Warning Threshold Channel 1
95	R/W	NV	Warning Threshold Channel 2
96	R/W	NV	Warning Threshold Channel 3
97	R/W	NV	Warning Threshold Channel 4
98	R/W	NV	Warning Threshold Channel 5
99	R/W	NV	Warning Threshold Channel 6
100	R/W	NV	Warning Threshold Channel 7
101	R/W	NV	Warning Threshold Channel 8
102	R/W	NV	Warning Threshold Channel 9
103	R/W	NV	Warning Threshold Channel 10
104	R/W	NV	Warning Threshold Channel 11
105	R/W	NV	Warning Threshold Channel 12
106	R/W	NV	Warning Threshold Channel 13
107	R/W	NV	Warning Threshold Channel 14
108	R/W	NV	Warning Threshold Channel 15
109	R/W	NV	Warning Threshold Channel 16
110	R/W	NV	Warning Threshold Channel 17
111	R/W	NV	Warning Threshold Channel 18
112	R/W	NV	Warning Threshold Channel 19
113	R/W	NV	Warning Threshold Channel 20
114	R/W	NV	Warning Threshold Channel 21
115	R/W	NV	Warning Threshold Channel 22
116	R/W	NV	Warning Threshold Channel 23
117	R/W	NV	Warning Threshold Channel 24
118	R/W	NV	Warning Threshold Channel 25
119	R/W	NV	Warning Threshold Channel 26
120	R/W	NV	Warning Threshold Channel 27
121	R/W	NV	Warning Threshold Channel 28
122	R/W	NV	Warning Threshold Channel 29
123	R/W	NV	Warning Threshold Channel 30
124	R/W	NV	Warning Threshold Channel 31
125	R/W	NV	Warning Threshold Channel 32
126	R/W	NV	Warning Threshold Channel 33
127	R/W	NV	Warning Threshold Channel 34
128	R/W	NV	Warning Threshold Channel 35
129	R/W	NV	Warning Threshold Channel 36
130	R/W	NV	Warning Threshold Channel 37
131	R/W	NV	Warning Threshold Channel 38
132	R/W	NV	Warning Threshold Channel 39
133	R/W	NV	Warning Threshold Channel 40
134	R/W	NV	Warning Threshold Channel 41
135	R/W	NV	Warning Threshold Channel 42

#	R/W	NV	Description

The following Critical alarm Threshold registers set the thresholds for the Critical alarms as a percentage of the breaker size registers (52-93). A Critical alarm will occur if the measured current is above the Critical alarm Threshold for at least the Critical alarm Time Delay. Units are in percent (75 = 75%). Range is 0-100. Default setting is 70%.

136	R/W	NV	Critical Alarm Threshold Channel 1
137	R/W	NV	Critical Alarm Threshold Channel 2
138	R/W	NV	Critical Alarm Threshold Channel 3
139	R/W	NV	Critical Alarm Threshold Channel 4
140	R/W	NV	Critical Alarm Threshold Channel 5
141	R/W	NV	Critical Alarm Threshold Channel 6
142	R/W	NV	Critical Alarm Threshold Channel 7
143	R/W	NV	Critical Alarm Threshold Channel 8
144	R/W	NV	Critical Alarm Threshold Channel 9
145	R/W	NV	Critical Alarm Threshold Channel 10
146	R/W	NV	Critical Alarm Threshold Channel 11
147	R/W	NV	Critical Alarm Threshold Channel 12
148	R/W	NV	Critical Alarm Threshold Channel 13
149	R/W	NV	Critical Alarm Threshold Channel 14
150	R/W	NV	Critical Alarm Threshold Channel 15
151	R/W	NV	Critical Alarm Threshold Channel 16
152	R/W	NV	Critical Alarm Threshold Channel 17
153	R/W	NV	Critical Alarm Threshold Channel 18
154	R/W	NV	Critical Alarm Threshold Channel 19
155	R/W	NV	Critical Alarm Threshold Channel 20
156	R/W	NV	Critical Alarm Threshold Channel 21
157	R/W	NV	Critical Alarm Threshold Channel 22
158	R/W	NV	Critical Alarm Threshold Channel 23
159	R/W	NV	Critical Alarm Threshold Channel 24
160	R/W	NV	Critical Alarm Threshold Channel 25
161	R/W	NV	Critical Alarm Threshold Channel 26
162	R/W	NV	Critical Alarm Threshold Channel 27
163	R/W	NV	Critical Alarm Threshold Channel 28
164	R/W	NV	Critical Alarm Threshold Channel 29
165	R/W	NV	Critical Alarm Threshold Channel 30
166	R/W	NV	Critical Alarm Threshold Channel 31
167	R/W	NV	Critical Alarm Threshold Channel 32
168	R/W	NV	Critical Alarm Threshold Channel 33
169	R/W	NV	Critical Alarm Threshold Channel 34
170	R/W	NV	Critical Alarm Threshold Channel 35
171	R/W	NV	Critical Alarm Threshold Channel 36
172	R/W	NV	Critical Alarm Threshold Channel 37
173	R/W	NV	Critical Alarm Threshold Channel 38
174	R/W	NV	Critical Alarm Threshold Channel 39
175	R/W	NV	Critical Alarm Threshold Channel 40
176	R/W	NV	Critical Alarm Threshold Channel 41
177	R/W	NV	Critical Alarm Threshold Channel 42

#	R/W	NV	Description

Each of the following Warning Time Delay registers set the minimum time required for the current to exist above the Warning Threshold before the Warning alarm is set. Units are in seconds. Range is 0-65535. Default is all set to 0.

178	R/W	NV	Warning Time Delay Channel 1
179	R/W	NV	Warning Time Delay Channel 2
180	R/W	NV	Warning Time Delay Channel 3
181	R/W	NV	Warning Time Delay Channel 4
182	R/W	NV	Warning Time Delay Channel 5
183	R/W	NV	Warning Time Delay Channel 6
184	R/W	NV	Warning Time Delay Channel 7
185	R/W	NV	Warning Time Delay Channel 8
186	R/W	NV	Warning Time Delay Channel 9
187	R/W	NV	Warning Time Delay Channel 10
188	R/W	NV	Warning Time Delay Channel 11
189	R/W	NV	Warning Time Delay Channel 12
190	R/W	NV	Warning Time Delay Channel 13
191	R/W	NV	Warning Time Delay Channel 14
192	R/W	NV	Warning Time Delay Channel 15
193	R/W	NV	Warning Time Delay Channel 16
194	R/W	NV	Warning Time Delay Channel 17
195	R/W	NV	Warning Time Delay Channel 18
196	R/W	NV	Warning Time Delay Channel 19
197	R/W	NV	Warning Time Delay Channel 20
198	R/W	NV	Warning Time Delay Channel 21
199	R/W	NV	Warning Time Delay Channel 22
200	R/W	NV	Warning Time Delay Channel 23
201	R/W	NV	Warning Time Delay Channel 24
202	R/W	NV	Warning Time Delay Channel 25
203	R/W	NV	Warning Time Delay Channel 26
204	R/W	NV	Warning Time Delay Channel 27
205	R/W	NV	Warning Time Delay Channel 28
206	R/W	NV	Warning Time Delay Channel 29
207	R/W	NV	Warning Time Delay Channel 30
208	R/W	NV	Warning Time Delay Channel 31
209	R/W	NV	Warning Time Delay Channel 32
210	R/W	NV	Warning Time Delay Channel 33
211	R/W	NV	Warning Time Delay Channel 34
212	R/W	NV	Warning Time Delay Channel 35
213	R/W	NV	Warning Time Delay Channel 36
214	R/W	NV	Warning Time Delay Channel 37
215	R/W	NV	Warning Time Delay Channel 38
216	R/W	NV	Warning Time Delay Channel 39
217	R/W	NV	Warning Time Delay Channel 40
218	R/W	NV	Warning Time Delay Channel 41
219	R/W	NV	Warning Time Delay Channel 42

#	R/W	NV	Description

Each of the following Critical Alarm Time Delay registers set the minimum time required for the current to exist above the Critical Alarm Threshold before the Critical Alarm is set. Units are in seconds. Range is 0-65535. Default is all set to 10.

220	R/W	NV	Critical Alarm Time Delay Channel 1
221	R/W	NV	Critical Alarm Time Delay Channel 2
222	R/W	NV	Critical Alarm Time Delay Channel 3
223	R/W	NV	Critical Alarm Time Delay Channel 4
224	R/W	NV	Critical Alarm Time Delay Channel 5
225	R/W	NV	Critical Alarm Time Delay Channel 6
226	R/W	NV	Critical Alarm Time Delay Channel 7
227	R/W	NV	Critical Alarm Time Delay Channel 8
228	R/W	NV	Critical Alarm Time Delay Channel 9
229	R/W	NV	Critical Alarm Time Delay Channel 10
230	R/W	NV	Critical Alarm Time Delay Channel 11
231	R/W	NV	Critical Alarm Time Delay Channel 12
232	R/W	NV	Critical Alarm Time Delay Channel 13
233	R/W	NV	Critical Alarm Time Delay Channel 14
234	R/W	NV	Critical Alarm Time Delay Channel 15
235	R/W	NV	Critical Alarm Time Delay Channel 16
236	R/W	NV	Critical Alarm Time Delay Channel 17
237	R/W	NV	Critical Alarm Time Delay Channel 18
238	R/W	NV	Critical Alarm Time Delay Channel 19
239	R/W	NV	Critical Alarm Time Delay Channel 20
240	R/W	NV	Critical Alarm Time Delay Channel 21
241	R/W	NV	Critical Alarm Time Delay Channel 22
242	R/W	NV	Critical Alarm Time Delay Channel 23
243	R/W	NV	Critical Alarm Time Delay Channel 24
244	R/W	NV	Critical Alarm Time Delay Channel 25
245	R/W	NV	Critical Alarm Time Delay Channel 26
246	R/W	NV	Critical Alarm Time Delay Channel 27
247	R/W	NV	Critical Alarm Time Delay Channel 28
248	R/W	NV	Critical Alarm Time Delay Channel 29
249	R/W	NV	Critical Alarm Time Delay Channel 30
250	R/W	NV	Critical Alarm Time Delay Channel 31
251	R/W	NV	Critical Alarm Time Delay Channel 32
252	R/W	NV	Critical Alarm Time Delay Channel 33
253	R/W	NV	Critical Alarm Time Delay Channel 34
254	R/W	NV	Critical Alarm Time Delay Channel 35
255	R/W	NV	Critical Alarm Time Delay Channel 36
256	R/W	NV	Critical Alarm Time Delay Channel 37
257	R/W	NV	Critical Alarm Time Delay Channel 38
258	R/W	NV	Critical Alarm Time Delay Channel 39
259	R/W	NV	Critical Alarm Time Delay Channel 40
260	R/W	NV	Critical Alarm Time Delay Channel 41
261	R/W	NV	Critical Alarm Time Delay Channel 42

#	R/W	NV	Description
262	R	NV	Serial Number Most-Significant-Word
263	R	NV	Serial Number Least-Significant-Word
268	W		Global Breaker Size Writing this register will set all the Breaker Size registers to the value written.
269	W		Global Warning Threshold Writing this register will set all the Warning Threshold registers to the value written.
270	W		Global Critical Alarm Threshold Writing this register will set all the Critical Alarm Threshold registers to the value written.
271	W		Global Warning Time Delay Writing this register will set all the Warning Time Delay registers to the value written.
272	W		Global Critical Alarm Time Delay Writing this register will set all the Critical Alarm Time Delay registers to the value written.
274	R/W	NV	Board Name: 1st 2 characters (Default = 'BR')
275	R/W	NV	Board Name: 2nd 2 characters (Default = 'D1')

The following Instantaneous Warning Registers are non-latching versions of registers 44-46. These registers set a bit for every channel which reads a current above the Warning Threshold but below the Critical Alarm Threshold for at least the Warning Time-Delay. All alarms are non-latching and the bit will be automatically reset if the current falls below the Warning Threshold for any length of time.

#	R/W	NV	Description
281	R		Instantaneous Warning Register 1

bit 0: Channel 1
bit 1: Channel 2
bit 2: Channel 3
bit 3: Channel 4
bit 4: Channel 5
bit 5: Channel 6
bit 6: Channel 7
bit 7: Channel 8
bit 8: Channel 9
bit 9: Channel 10
bit 10: Channel 11
bit 11: Channel 12
bit 12: Channel 13
bit 13: Channel 14
bit 14: Channel 15
bit 15: Channel 16

282 R Instantaneous Warning Register 2

bit 0: Channel 17
bit 1: Channel 18
bit 2: Channel 19
bit 3: Channel 20
bit 4: Channel 21
bit 5: Channel 22
bit 6: Channel 23
bit 7: Channel 24
bit 8: Channel 25
bit 9: Channel 26
bit 10: Channel 27
bit 11: Channel 28
bit 12: Channel 29
bit 13: Channel 30
bit 14: Channel 31
bit 15: Channel 32

283 R Instantaneous Warning Register 3

bit 0: Channel 33
bit 1: Channel 34
bit 2: Channel 35
bit 3: Channel 36
bit 4: Channel 37
bit 5: Channel 38
bit 6: Channel 39
bit 7: Channel 40
bit 8: Channel 41
bit 9: Channel 42
bits 10-15: Always read as 0

The following Instantaneous Critical Alarm Registers are non-latching versions of registers 47-49. These registers set a bit for every channel which reads a current above the Critical Alarm Threshold for at least the Critical Alarm Time-Delay. All alarms are non-latching and the bit will be automatically reset if the current falls below the Critical Alarm Threshold for any length of time.

#	R/W	NV	Description
284	R		Instantaneous Critical Alarm Register 1 bit 0: Channel 1 bit 1: Channel 2 bit 2: Channel 3 bit 3: Channel 4 bit 4: Channel 5 bit 5: Channel 6 bit 6: Channel 7 bit 7: Channel 8 bit 8: Channel 9 bit 9: Channel 10 bit 10: Channel 11 bit 11: Channel 12 bit 12: Channel 13 bit 13: Channel 14 bit 14: Channel 15 bit 15: Channel 16
285	R		Instantaneous Critical Alarm Register 2 bit 0: Channel 17 bit 1: Channel 18 bit 2: Channel 19 bit 3: Channel 20 bit 4: Channel 21 bit 5: Channel 22 bit 6: Channel 23 bit 7: Channel 24 bit 8: Channel 25 bit 9: Channel 26 bit 10: Channel 27 bit 11: Channel 28 bit 12: Channel 29 bit 13: Channel 30 bit 14: Channel 31 bit 15: Channel 32
286	R		Instantaneous Critical Alarm Register 3 bit 0: Channel 33 bit 1: Channel 34 bit 2: Channel 35 bit 3: Channel 36 bit 4: Channel 37 bit 5: Channel 38 bit 6: Channel 39 bit 7: Channel 40 bit 8: Channel 41 bit 9: Channel 42 bits 10-15: Always read as 0

LEGEND

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R/W:  R     = Read-only
      R/W   = Read/Write
NV:   Value is stored in non-volatile memory
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Supported Modbus Commands

Read Holding Register (03h), Preset Single Register (06h), Report Slave ID (11h)