

Systems Integration

Multistack BACnet Solution: MS20/30/50 Standard Chiller Module

Table 1. MS20/30/50 Standard Chiller Module Point Map.

Point	Type	Description	Range/Units ^{a,b,c}
1	LAO	Address	–
2	LAO	Application	4150
3	LDO	On/Off Control	Off/On
4	LDI	On/Off Status	Off/On
5	LDI	EX1 Fault Display	No/Yes
6	LDI	EX2 Remote Off	No/Yes
7	LDI	EX3 Fault Display	No/Yes
8	LDI	EX4 Fault Display	No/Yes
9	LDI	No Chilled Water Flow	No/Yes
10	LDI	No Condenser Water Flow	No/Yes
11	LDI	Low Leaving Chilled Water Temperature System	No/Yes
12	LDI	Compressor 1 Fault Status	Off/On
13	LDI	Compressor 2 Fault Status	Off/On
14	LDI	Compressor 3 Fault Status	Off/On
15	LDI	Compressor 4 Fault Status	Off/On
16	LDI	Compressor 5 Fault Status	Off/On
17	LDI	Compressor 6 Fault Status	Off/On
18	LDI	Compressor 7 Fault Status	Off/On
19	LDI	Compressor 8 Fault Status	Off/On
20	LDI	Compressor 9 Fault Status	Off/On
21	LDI	Compressor 10 Fault Status	Off/On
22	LDI	Compressor 11 Fault Status	Off/On
23	LDI	Compressor 12 Fault Status	Off/On
24	LDI	Compressor 13 Fault Status	Off/On
25	LDI	Compressor 14 Fault Status	Off/On
26	LDI	Compressor 15 Fault Status	Off/On

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Table 1. MS20/30/50 Standard Chiller Module Point Map. (continued)

Point	Type	Description	Range/Units^{a,b,c}
27	LDI	Compressor 16 Fault Status	Off/On
28	LDI	Compressor 17 Fault Status	Off/On
29	LDI	Compressor 18 Fault Status	Off/On
30	LDI	Compressor 19 Fault Status	Off/On
31	LDI	Compressor 20 Fault Status	Off/On
32	LDI	Compressor 21 Fault Status	Off/On
33	LDI	Compressor 22 Fault Status	Off/On
34	LDI	Compressor 23 Fault Status	Off/On
35	LDI	Compressor 24 Fault Status	Off/On
36	LAI	Total Number of Compressors	–
37	LAI	Capacity	%
38	LAI	Demand	%
39	LAI	Current Lead Compressor	–
40	LAO	Lead Compressor Setpoint	–
41	LAI	Active Load Limit	%
42	LAO	Load Limit Setpoint	%
43	LAI	Active Upper Setpoint	°F
44	LAO	Upper Setpoint	°F
45	LAI	Active Lower Setpoint	°F
46	LAO	Lower Setpoint	°F
47	LAI	Active Variable Setpoint	°F
48	LAO	Variable Setpoint	°F
49	LAI	Active Delay Time	sec
50	LAO	Delay Time	sec
51	LAI	Active Failure Indicator	%
52	LAO	Failure Indicator	%
53	LAI	Active Flush Time	hr
54	LAO	Flush Time Setpoint	hr
55	LAI	Active Flush Duration	sec
56	LAO	Flush Duration Setpoint	sec
57	LAI	Entering Chilled Water System Temperature	°F
58	LAI	Leaving Chilled Water System Temperature	°F
59	LAI	Entering Condenser Water System Temperature	°F
60	LAI	Leaving Condenser Water System Temperature	°F
61	LAI	Time at 0 to 9% Load	hr

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Table 1. MS20/30/50 Standard Chiller Module Point Map. (continued)

Point	Type	Description	Range/Units^{a,b,c}
62	LAI	Time at 10 to 19% Load	hr
63	LAI	Time at 20 to 29% Load	hr
64	LAI	Time at 30 to 39% Load	hr
65	LAI	Time at 40 to 49% Load	hr
66	LAI	Time at 50 to 59% Load	hr
67	LAI	Time at 60 to 69% Load	hr
68	LAI	Time at 70 to 79% Load	hr
69	LAI	Time at 80 to 89% Load	hr
70	LAI	Time at 90 to 100% Load	hr
71	LAI	Compressor 1 Suction Temperature	°F
72	LAI	Compressor 1 Leaving Chilled Water Temperature	°F
73	LAI	Compressor 2 Suction Temperature	°F
74	LAI	Compressor 2 Leaving Chilled Water Temperature	°F
75	LAI	Compressor 3 Suction Temperature	°F
76	LAI	Compressor 3 Leaving Chilled Water Temperature	°F
77	LAI	Compressor 4 Suction Temperature	°F
78	LAI	Compressor 4 Leaving Chilled Water Temperature	°F
79	LAI	Compressor 5 Suction Temperature	°F
80	LAI	Compressor 5 Leaving Chilled Water Temperature	°F
81	LAI	Compressor 6 Suction Temperature	°F
82	LAI	Compressor 6 Leaving Chilled Water Temperature	°F
83	LAI	Compressor 7 Suction Temperature	°F
84	LAI	Compressor 7 Leaving Chilled Water Temperature	°F
85	LAI	Compressor 8 Suction Temperature	°F
86	LAI	Compressor 8 Leaving Chilled Water Temperature	°F
87	LAI	Compressor 9 Suction Temperature	°F
88	LAI	Compressor 9 Leaving Chilled Water Temperature	°F
89	LAI	Compressor 10 Suction Temperature	°F
90	LAI	Compressor 10 Leaving Chilled Water Temperature	°F
91	LAI	Compressor 11 Suction Temperature	°F
92	LAI	Compressor 11 Leaving Chilled Water Temperature	°F
93	LAI	Compressor 12 Suction Temperature	°F
94	LAI	Compressor 12 Leaving Chilled Water Temperature	°F
95	LAI	Compressor 13 Suction Temperature	°F
96	LAI	Compressor 13 Leaving Chilled Water Temperature	°F

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Table 1. MS20/30/50 Standard Chiller Module Point Map. (continued)

Point	Type	Description	Range/Units^{a,b,c}
97	LAI	Compressor 14 Suction Temperature	°F
98	LAI	Compressor 14 Leaving Chilled Water Temperature	°F
99	LAI	Compressor 15 Suction Temperature	°F
100	LAI	Compressor 15 Leaving Chilled Water Temperature	°F
101	LAI	Compressor 16 Suction Temperature	°F
102	LAI	Compressor 16 Leaving Chilled Water Temperature	°F
103	LAI	Compressor 17 Suction Temperature	°F
104	LAI	Compressor 17 Leaving Chilled Water Temperature	°F
105	LAI	Compressor 18 Suction Temperature	°F
106	LAI	Compressor 18 Leaving Chilled Water Temperature	°F
107	LAI	Compressor 19 Suction Temperature	°F
108	LAI	Compressor 19 Leaving Chilled Water Temperature	°F
109	LAI	Compressor 20 Suction Temperature	°F
110	LAI	Compressor 20 Leaving Chilled Water Temperature	°F
111	LAI	Compressor 21 Suction Temperature	°F
112	LAI	Compressor 21 Leaving Chilled Water Temperature	°F
113	LAI	Compressor 22 Suction Temperature	°F
114	LAI	Compressor 22 Leaving Chilled Water Temperature	°F
115	LAI	Compressor 23 Suction Temperature	°F
116	LAI	Compressor 23 Leaving Chilled Water Temperature	°F
117	LAI	Compressor 24 Suction Temperature	°F
118	LAI	Compressor 24 Leaving Chilled Water Temperature	°F
119	LAI	Total Compressors In Fault	–
120	LAI	Module Fault Compressor 1	–
121	LAI	Module Fault Compressor 2	–
122	LAI	Module Fault Compressor 3	–
123	LAI	Module Fault Compressor 4	–
124	LAI	Module Fault Compressor 5	–
125	LAI	Module Fault Compressor 6	–
126	LAI	Module Fault Compressor 7	–
127	LAI	Module Fault Compressor 8	–
128	LAI	Module Fault Compressor 9	–
129	LAI	Module Fault Compressor 10	–
130	LAI	Module Fault Compressor 11	–
131	LAI	Module Fault Compressor 12	–

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Table 1. MS20/30/50 Standard Chiller Module Point Map. (continued)

Point	Type	Description	Range/Units^{a,b,c}
132	LAI	Module Fault Compressor 13	–
133	LAI	Module Fault Compressor 14	–
134	LAI	Module Fault Compressor 15	–
135	LAI	Module Fault Compressor 16	–
136	LAI	Module Fault Compressor 17	–
137	LAI	Module Fault Compressor 18	–
138	LAI	Module Fault Compressor 19	–
139	LAI	Module Fault Compressor 20	–
140	LAI	Module Fault Compressor 21	–
141	LAI	Module Fault Compressor 22	–
142	LAI	Module Fault Compressor 23	–
143	LAI	Module Fault Compressor 24	–
144	LAI	Fault History 1 Type	See Table 2 and Table 3
145	LAI	Fault History 2 Type	See Table 2 and Table 3
146	LAI	Fault History 3 Type	See Table 2 and Table 3
147	LAI	Fault History 4 Type	See Table 2 and Table 3
148	LAI	Fault History 5 Type	See Table 2 and Table 3
149	LAI	Fault History 6 Type	See Table 2 and Table 3
150	LAI	Fault History 7 Type	See Table 2 and Table 3
151	LAI	Fault History 8 Type	See Table 2 and Table 3
152	LAI	Fault History 9 Type	See Table 2 and Table 3
153	LAI	Fault History 10 Type	See Table 2 and Table 3
154	LAI	Fault History 11 Type	See Table 2 and Table 3
155	LAI	Fault History 12 Type	See Table 2 and Table 3
156	LAI	Fault History 13 Type	See Table 2 and Table 3
157	LAI	Fault History 14 Type	See Table 2 and Table 3
158	LAI	Fault History 15 Type	See Table 2 and Table 3
159	LAI	Fault History 16 Type	See Table 2 and Table 3
160	LAI	Fault History 17 Type	See Table 2 and Table 3
161	LAI	Fault History 18 Type	See Table 2 and Table 3
162	LAI	Fault History 19 Type	See Table 2 and Table 3
163	LAI	Fault History 20 Type	See Table 2 and Table 3
164	LAI	Fault History 1 Compressor Number	–
165	LAI	Fault History 2 Compressor Number	–
166	LAI	Fault History 3 Compressor Number	–

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Table 1. MS20/30/50 Standard Chiller Module Point Map. (continued)

Point	Type	Description	Range/Units^{a,b,c}
167	LAI	Fault History 4 Compressor Number	–
168	LAI	Fault History 5 Compressor Number	–
169	LAI	Fault History 6 Compressor Number	–
170	LAI	Fault History 7 Compressor Number	–
171	LAI	Fault History 8 Compressor Number	–
172	LAI	Fault History 9 Compressor Number	–
173	LAI	Fault History 10 Compressor Number	–
174	LAI	Fault History 11 Compressor Number	–
175	LAI	Fault History 12 Compressor Number	–
176	LAI	Fault History 13 Compressor Number	–
177	LAI	Fault History 14 Compressor Number	–
178	LAI	Fault History 15 Compressor Number	–
179	LAI	Fault History 16 Compressor Number	–
180	LAI	Fault History 17 Compressor Number	–
181	LAI	Fault History 18 Compressor Number	–
182	LAI	Fault History 19 Compressor Number	–
183	LAI	Fault History 20 Compressor Number	–

^a Values noted for LDIs and LDOs are in the following format: OFF text/ON text.

^b This column indicates the value/range or engineering units or both if known.

^c The default English value is not italicized. An italicized entry indicates an SI value.

Table 2. System Fault Type (Points 144 to 163).

Value	Description
1	EX1 FAULT (Record)
2	EX3 FAULT (Record)
4	EX4 FAULT (Record)
8	Low Leaving Chilled Water Temperature (Record)
16	Low Chilled Water Flow (Record)
32	Low Condenser Water Flow (Record)
65	EX1 FAULT (Current)
66	EX3 FAULT (Current)
68	EX4 FAULT (Current)
72	Low Leaving Chilled Water Temperature (Current)
80	Low Chilled Water Flow (Current)
96	Low Condenser Water Flow (Current)
129	EX1 FAULT (Reset)
130	EX3 FAULT (Reset)
136	Low Leaving Chilled Water Temperature (Reset)
144	Low Chilled Water Flow (Reset)
160	Low Condenser Water Flow (Reset)

Table 3. Module Fault Type (Points 144 to 163).

Value	Description
0	Low Suction Temperature (Record)
1	High Pressure Cutout (Record)
2	Low Pressure Cutout (Record)
4	Thermal Fault (Record)
8	Low Leaving Chilled Water Temperature (Record)
16	High Suction Temperature (Record)
32	Communication Error (Record)
64	Low Suction Temperature (Current/Reset)
65	High Pressure Cutout (Current/Reset)
66	Low Pressure Cutout (Current/Reset)
72	Low Leaving Chilled Water Temperature (Current/Reset)
80	High Suction Temperature (Current/Reset)
96	Communication Error (Current/Reset)

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