

## Systems Integration

# APOGEE<sup>®</sup> Open Processor with Airflow Dataguard Driver: CG Series

**Table 1. CG Series, Analog Points.**

Point	Type	Description	Range/Units
01	LAI	Return Air Temperature	°F
02	LAI	Supply Air Temperature	°F
03	LAI	PC/ECWS Water Temperature	°F
05	LAI	Return Air Humidity	% rh
09	LAI	PC/EWCS Valve Position	0 – 100%
10	LAI	Damper Position	0 – 100%
11	LAO	Return Air Temperature High Alarm Set Point	0 – 100°F
12	LAO	Supply Air Temperature High Alarm Set Point	0 – 100°F
13	LAO	PC/ECWS Water Temperature High Alarm Set Point	0 – 100°F
14	LAO	Hot Water Temperature High Alarm Set Point	0 – 200°F
15	LAO	Return Air Humidity High Alarm Set Point	0 – 100% rh
19	LAI	Hot Water Valve Position	0 – 100%
21	LAO	Return Air Temperature Low Alarm Set Point	0 – 100°F
22	LAO	Supply Air Temperature Low Alarm Set Point	0 – 100°F
23	LAO	PC/ECWS Water Temperature Low Alarm Set Point	0 – 100°F
24	LAO	Hot Water Temperature Low Alarm Set Point	0 – 200°F
25	LAO	Return Air Humidity Low Alarm Set Point	0 – 100% rh
30	LAO	Cooling Set Point	12 – 95°F
31	LAO	Cooling Band	1 – 15°F
33	LAO	Heating Set Point	0 – 85°F
34	LAO	Heating Band	1 – 15°F
36	LAO	Dehumidification Set Point	10 – 95% rh

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**Table 1. CG Series, Analog Points.**

Point	Type	Description	Range/Units
37	LAO	Dehumidification Band	1 – 30% rh
39	LAO	Humidification Set Point	10 – 85% rh
40	LAO	Humidification Band	1 – 30% rh
42	LAO	Proportional Cool Offset	-20 – 20°F
43	LAO	Proportional Cool Band	1 – 15°F
45	LAO	Supply Air Temperature Set Point	°F
46	LAO	Supply Air Temperature Band	°F
52	LAO	Assist Band (-4016 and -4024 Units Only)	—
53	LAO	Assist Integral (-4016 and -4024 Units Only)	—
96	LAI	Total Failed Commands	—
97	LAI	Last Failed Command Point	—
98	LAI	Last Failed Command Drop	—
99	LDI	Communication Failure	Normal/Alarm

**Table 2. CG Water Series, Integer Points.**

Point	Type	Description	Range/Units
01	LAI	Model Number	—
02	LAI	Version Number	—
03	LAI	Version Integer Points Portion	—
04	LAO	Standby Unit In Redundant Group (-4016 and 4024 Units Only)	—
06	LAI	Number Of Heat Stages On	—
10	LAI	Blower Run Hours, Low Bit	Hrs
11	LAI	Blower Run Hours, High Bit	Hrs
16	LAI	Humidifier Run Hours, Low Bit	Hrs
17	LAI	Humidifier Run Hours, High Bit	Hrs
20	LAI	Compressor 1 Run Hours, Low Bit	Hrs
21	LAI	Compressor 1 Run Hours, High Bit	Hrs
24	LAI	Compressor 2 Run Hours, Low Bit	Hrs
25	LAI	Compressor 2 Run Hours, High Bit	Hrs
50	LAI	Master Redundant Unit (-4016 and -4024 Units Only)	See Table 3
51	LAI	Slave 1 Redundant Unit State (-4016 and -4024 Units Only)	See Table 3

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**Table 2. CG Water Series, Integer Points.**

Point	Type	Description	Range/Units
52	LAI	Slave 2 Redundant Unit (-4016 and -4024 Units Only)	See Table 3
53	LAI	Slave 3 Redundant Unit State (-4016 and -4024 Units Only)	See Table 3
99	LAO	Alarm Reset Address	See Table 4

**Table 3. Redundant Unit State (Integer Points, Points 50 to 53).**

Value	Description
0	Not In Redundant Group
1	Unit Failed
2	Unit In Standby
3	Unit Running
4	Unit Assisting

**Table 4. Alarm Reset (Integer Points, Point 99).**

Value	Description
1	Clogged Filter Alarm
2	Water Detection Alarm
3	Compressor 1 Low Pressure Alarm
5	Compressor 2 Low Pressure Alarm
6	Water Flow Alarm
7	Firestat Alarm
8	Smoke Monitor Alarm
9	Humidifier Alarm
10	Compressor 1 High Head Pressure Alarm
11	Compressor 2 High Head Pressure Alarm
12	Return Air Temperature Alarm
13	Supply Air Temperature Alarm
14	PC/ECWS Water Temperature Alarm
16	Return Air Humidity Alarm
20	Power Loss Alarm
21	Compressor 1 Pump Down Alarm
22	Compressor 2 Pump Down Alarm

**Table 5. CG Series, Digital Points.**

<b>Point</b>	<b>Type</b>	<b>Description</b>	<b>Range/Units</b>
01	LDO	Celsius Units	English/Celsius
02	LDO	Unit Start	Stop/Start
03	LDI	Operating Mode - Cooling	No/Yes
04	LDI	Operating Mode - Heating	No/Yes
05	LDI	Operating Mode - Dehumidifying	No/Yes
06	LDI	Operating Mode - Humidifying	No/Yes
07	LDI	Master Enabled (-4016 and -4024 Units Only)	Slave/Master
08	LDI	Compressor 2 Pump Down Alarm	Normal/Alarm
09	LDO	Alarm Reset (See Table 4)	No/Yes
10	LDI	Airflow Alarm	Normal/Alarm
11	LDI	Clogged Filter Alarm	Normal/Alarm
12	LDI	Water Detector Alarm	Normal/Alarm
13	LDI	Compressor 1 Low Pressure Alarm	Normal/Alarm
14	LDI	System Enable Input	Normal/Alarm
15	LDI	Compressor 2 Low Pressure Alarm	Normal/Alarm
16	LDI	Water Flow Alarm	Normal/Alarm
17	LDI	Firestat Alarm	Normal/Alarm
18	LDI	Smoke Monitor Alarm	Normal/Alarm
19	LDI	Humidifier Alarm	Normal/Alarm
20	LDI	Compressor 1 High Head Pressure Alarm	Normal/Alarm
21	LDI	Compressor 2 High Head Pressure Alarm	Normal/Alarm
22	LDI	Return Air Temperature High Alarm	Normal/Alarm
23	LDI	Return Air Temperature Low Alarm	Normal/Alarm
24	LDI	Supply Air Temperature High Alarm	Normal/Alarm
25	LDI	Supply Air Temperature Low Alarm	Normal/Alarm
26	LDI	PC/ECWS Water Temperature High Alarm	Normal/Alarm
27	LDI	PC/ECWS Water Temperature Low Alarm	Normal/Alarm
30	LDI	Return Air Humidity High Alarm	Normal/Alarm
31	LDI	Return Air Humidity Low Alarm	Normal/Alarm
38	LDI	Power Loss Alarm	Normal/Alarm

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**Table 5. CG Series, Digital Points.**

<b>Point</b>	<b>Type</b>	<b>Description</b>	<b>Range/Units</b>
39	LDI	Blower	Off/On
40	LDI	Heater Stage 1	Off/On
41	LDI	Heater Stage 2	Off/On
42	LDI	Humidifier	Off/On
43	LDI	Compressor 1 Liquid Line Solenoid	Closed/Open
44	LDI	Compressor 1	Off/On
45	LDI	Compressor 2 Liquid Line Solenoid	Closed/Open
46	LDI	Compressor 2	Off/On
47	LDI	Compressor 1 Hot Gas Bypass	Off/On
48	LDI	Compressor 2 Hot Gas Bypass	Off/On
49	LDI	Common Alarm	Normal/Alarm
50	LDO	Airflow Alarm Enable	Disable/Enable
51	LDO	Clogged Filter Alarm Enable	Disable/Enable
52	LDO	Water Detector Alarm Enable	Disable/Enable
53	LDO	Compressor 1 Low Pressure Alarm Enable	Disable/Enable
55	LDO	Compressor 2 Low Pressure Alarm Enable	Disable/Enable
56	LDO	Water Flow Alarm Enable	Disable/Enable
57	LDO	Firestat Alarm Enable	Disable/Enable
58	LDO	Smoke Monitor Alarm Enable	Disable/Enable
59	LDO	Humidifier Alarm Enable	Disable/Enable
60	LDO	Compressor 1 High Head Pressure Alarm Enable	Disable/Enable
61	LDO	Compressor 2 High Head Pressure Alarm Enable	Disable/Enable
62	LDO	Return Air Temperature High Alarm Enable	Disable/Enable
63	LDO	Return Air Temperature Low Alarm Enable	Disable/Enable
64	LDO	Supply Air Temperature High Alarm Enable	Disable/Enable
65	LDO	Supply Air Temperature Low Alarm Enable	Disable/Enable
66	LDO	PC/ ECWS Water Temperature High Alarm Enable	Disable/Enable
67	LDO	PC/ ECWS Water Temperature Low Alarm Enable	Disable/Enable
70	LDO	Return Air Humidity High Alarm Enable	Disable/Enable
71	LDO	Return Air Humidity Low Alarm Enable	Disable/Enable
78	LDO	Blower Run Time Alarm Enable	Disable/Enable

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**Table 5. CG Series, Digital Points.**

<b>Point</b>	<b>Type</b>	<b>Description</b>	<b>Range/Units</b>
81	LDO	Humidifier Run Time Alarm Enable	Disable/Enable
83	LDO	Compressor 1 Run Time Alarm Enable	Disable/Enable
85	LDO	Compressor 2 Run Time Alarm Enable	Disable/Enable
89	LDI	Return Temperature Sensor Failure Alarm	Normal/Alarm
90	LDI	Supply Temperature Sensor Failure Alarm	Normal/Alarm
91	LDI	Chilled Water Temperature Sensor Failure Alarm	Normal/Alarm
92	LDI	Hot Water Temperature Sensor Failure Alarm	Normal/Alarm
93	LDI	Return Humidity Sensor Failure Alarm	Normal/Alarm
97	LDI	Compressor 1 Pump Down Alarm	Normal/Alarm
98	LDI	ECWS/Proportional Cooling Enabled	ECWS/Proportional
99	LDI	Electric/Proportional Heat Enabled	Electric/Proportional

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