

Systems Integration

YORK Modbus Solution to the YR Chiller with Standard Starter

Table 1. YR Chiller with Standard Starter APOGEE Points, Application Number: 4633.

Point	Type	Description	Range/Units ^{a b c}
1	LAO	Address	–
2	LAI	Application	–
3	LDI	Communication Error	Off/On
4	LAO	IP Address 1	–
5	LAO	IP Address 2	–
6	LAO	IP Address 3	–
7	LAO	IP Address 4	–
8	LAO	IP Port	–
9	LAO	Base Offset	–
10	LAO	Send Initial Values	–
11	LAO	Leaving Chilled Liquid Setpoint	°F °C
12	LAO	Motor Current Limit Setpoint	% FLA
13	LDO	Remote Start/Stop	Stop/Start
14	LAI	Leaving Chilled Liquid Temperature	°F °C
15	LAI	Return Chilled Liquid Temperature	°F °C
16	LAI	Evaporator Pressure	psi kPa
17	LAI	Condenser Pressure	psi kPa
18	LAI	Oil Pressure Differential	psi kPa
19	LAI	Return Condenser Liquid Temperature	°F °C
20	LAI	Leaving Condenser Liquid Temperature	°F °C
21	LAI	Motor Current Percent FLA	% FLA

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Table 1. YR Chiller with Standard Starter APOGEE Points, Application Number: 4633. (continued)

Point	Type	Description	Range/Units ^{a b c}
22	LAI	Spare P19	–
23	LAI	Spare P20	–
24	LAI	Spare P21	–
25	LAI	Spare P22	–
26	LAI	Spare P23	–
27	LAI	Spare P24	–
28	LAI	Leaving Chilled Liquid Setpoint - Selected	°F °C
29	LAI	Motor Current Limit Setpoint - Selected	% FLA
30	LAI	Evaporator Saturation Temperature	°F °C
31	LAI	Condenser Saturation Temperature	°F °C
32	LAI	Discharge Temperature	°F °C
33	LAI	Oil Temperature	°F °C
34	LAI	Filter Pressure Differential	psi kPa
35	LAI	Unit Operating Hours	hrs
36	LAI	Unit System Starts	starts
37	LAI	Minimum Load Control Motor FLA Limit	% FLA
38	LAI	Slide Valve Position	%
39	LDI	Motor Run Contacts	Off/On
40	LDI	Oil Return Solenoid	Off/On
41	LDI	Chilled Liquid Pump	Off/On
42	LDI	Panel Stop Switch [Start enabled/Stop]	Off/On
43	LDI	Chiller Liquid Flow Switch	Off/On
44	LDI	Spare P41	Off/On
45	LDI	Low Separator Oil Switch	Off/On
46	LDI	Spare P43	Off/On
47	LDI	Spare P44	Off/On
48	LDI	Spare P45	Off/On
49	LDI	Spare P46	Off/On
50	LDI	Spare P47	Off/On
51	LDI	Spare P48	Off/On
52	LDI	Spare P49	Off/On

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Table 1. YR Chiller with Standard Starter APOGEE Points, Application Number: 4633. (continued)

Point	Type	Description	Range/Units ^{a b c}
53	LDI	Spare P50	Off/On
54	LDI	Spare P51	Off/On
55	LDI	Spare P52	Off/On
56	LDI	Spare P53	Off/On
57	LDI	Spare P54	Off/On
58	LDI	Ice Storage Mode [Disabled/Enabled]	Disable/Enable
59	LAI	Anti-Recycle Time Remaining	sec
60	LAI	Unit Warning Fault Code	See Table 2
61	LAI	Operation Code	See Table 3
62	LAI	Unit Safety Fault Code	See Table 4
63	LAI	Unit Cycling Fault Code	See Table 5
64	LAI	Spare P61	–
65	LAI	Spare P62	–
66	LAI	Spare P63	–
67	LAI	Spare P64	–
68	LAI	Spare P65	–
69	LAI	Leaving Chilled Liquid Restart Temperature	°F °C
70	LAI	Seal Pressure Differential	psi <i>kPa</i>

^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. Warning Codes.

Value	Description
0	No Abnormal Condition
1	Real-Time Clock Failure
2	Default Setpoints Loaded
3	Evaporator Or Condenser Transducer Error
4	Evaporator - Low Pressure Limit
5	Condenser - High Pressure Limit
6	Condenser Transducer Error
7	Condenser - Freeze Threat
13	Oil - High Temperature
14	Motor - High Current Limit
20	Oil - Filter Dirty

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Table 2. Warning Codes. (continued)

Value	Description
21	Maximum Load - Load Limit
22	Minimum Load - Load Limit
23	Low Discharge Superheat Limit
24	Low Discharge Superheat Detected
27	Slide Valve Uncalibrated
28	Freeze Threat - Condenser Flow Switch

Table 3. Operational Codes.

Value	Description
0	Unit Stopped - Ready To Start
1	Unit Stopped - Local Shutdown
2	Unit Stopped - Remote Shutdown
3	Unit Stopped - Warning Active
4	Unit Stopped - Cycling Shutdown
5	Unit Stopped - Safety Shutdown
6	Unit Start Inhibit
7	Unit Starting
8	Unit Running - No Abnormal Condition
9	Unit Running - Warning Active
10	Unit Running - Chiller Unload Before Shutdown
11	Unit Lockout Delay

Table 4. Safety Codes.

Value	Description
0	No Abnormal Condition
1	Evaporator - Low Pressure
2	Evaporator - Transducer Or Leaving Liquid Probe
3	Evaporator - Temperature Transducer
4	Condenser - High Pressure Contacts Open
5	Condenser - High Pressure
6	Condenser - Pressure Transducer Out Of Range
7	Auxiliary Safety - Contacts Closed
8	Discharge - Low Temperature
9	Discharge - High Temperature
10	Oil - High Temperature
15	Oil- High Pressure
16	Oil- Filter Clogged

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Table 4. Safety Codes. (continued)

Value	Description
17	Oil - Low Seal Differential Pressure
19	Oil - Low Separator Oil Level
21	Control Panel - Power Failure
23	Motor Or Starter - Current Imbalance
49	Starter - Invalid Motor Selection
50	Oil Or Condenser Transducer Error
51	Evaporator - Low Pressure
52	Evaporator - Low Pressure - Smart Freeze

Table 5. Cycling Codes.

Value	Description
0	No Abnormal Condition
1	Multi-Unit Cycling - Contacts Open
2	System Cycling - Contacts Open
4	Oil - Low Temperature
5	Control Panel - Power Failure
6	Leaving Chilled Liquid - Low Temperature
7	Leaving Chilled Liquid - Flow Switch Open
8	Condenser - Flow Switch Open
9	Motor Controller - Contacts Open
10	Motor Controller - Loss Of Current
11	Power Fault
12	Control Panel - Schedule
13	Starter - Low Supply Line Voltage
14	Starter - High Supply Line Voltage

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