Object Naming Conventions

The communicated points for the Symbio™ controllers are generally named according to their function. While many of the points are read-only, others include both read and write capability. The established naming convention helps to identify the capabilities of each point. For most points, the suffix identifies the capability according to the following definition. While there are some exceptions, the majority of the points have been defined according to these guidelines.

Suffix	Description
Status	Points with the Status suffix are defined as read-only. The status point reports the value being used by the controller.
Local	Points with the Local suffix are defined as read-only. The local point reports values associated with controller sensors, both wired and wireless. The local value may or may not be actively used by the controller, depending on the presence or absence of a communicated value (BAS). When both a local and communicated value exist, the communicated value is used.
Active	Points with the Active suffix are defined as read-only. Points designated as active are normally the result of the arbitration between a communicated value(BAS) and at least one value local to the equipment, such as a sensor or default setpoint. The active point reports the value being input to the controller.
Setpoint	Points with the Setpoint suffix are defined as either read-only or read/write. For BACnet®, the binary input, analog input and multi-state input points are all read-only. These setpoints report the value currently in use by the controller. The analog value, binary value and multi-state value points are all read/write. These points are provided for use by the building automation system (BAS). When used, these points are written internally to arbitration logic. This defines the interaction with hardwired points, editable software configuration points and the relinquish default value/state. Refer to the Appendix for additional information.
Input	Points with the Input suffix are defined as read-only. These points normally reflect the status of a sensor input, either hardwired or communicating wirelessly (Air-Fi®). However, the input point reflects the arbitrated result of the controller sensor input and a communicated value, if present. When both a controller sensor and communicated value exist, the controller will use and report the communicated value.
Arbitrator	Points with the "Arbitrator" suffix are to be used as read-only. The arbitrator prioritizes inputs from communicating points, hardwired points and stored defaults points. The priority array of the arbitration point displays each of the values provided, including the active status, indicating which of the input sources is being used. Refer to the Appendix for additional information.
BAS	Points with the BAS suffix are defined as read/write. These points are provided for use by the building automation system (BAS). When used, these points are written to arbitration logic. This defines the interaction with hardwired points, editable software configuration points and the relinquished default value/state. Refer to the Appendix for additional information.
Command	Points with the Command suffix are defined as read/write. These points are written to change the default behavior of the controller. Once written, these point values may be persisted.
Request	Points with the Request suffix are defined as read/write. These points are written to request a change the operating behavior of the controller.

Object Data Points and Diagnostic Data Points

The following tables are sorted as follows:

- Tables are listed by input/output type and sorted by object identifier. These tables provide the user with the unit's type for each object
- Tables are sorted by object name and provide a complete list of object names, types, values/ranges, and descriptions.

Note: Not all points are available to the user. The available data points are defined during self-configuration and are dependent on the type of equipment.

Object Identifier	Object Name	Description	Units	Configuration Dependency
1	Active Base Loading Setpoint		%	
3	Active Cool/Heat Setpoint Temperature		°C	
4	Active Demand Limit Setpoint		%	
5	AFD Average Motor Current % RLA		%	
6	AFD Calculated Motor Voltage		V	
7	AFD DC Bus Voltage		V	
8	AFD Frequency Command		%	
9	AFD Heatsink Temperature		°C	
10	AFD Motor Current U		Amps	
11	AFD Motor Current U % RLA		%	
12	AFD Motor Current V		Amps	
13	AFD Motor Current V % RLA		%	
14	AFD Motor Current W		Amps	
15	AFD Motor Current W % RLA		%	
16	AFD Output Power		kW	
17	AFD Percent Speed		%	
18	Approx Cond Water Flow		lpm	
19	Approx Evap Water Flow		lpm	
20	Calculated Chiller Capacity		kW	
21	Compressor Bearing Temperature 1		°C	
22	Compressor Bearing Temperature 2		°C	
23	Compressor Refrigerant Discharge Temperature		°C	
24	Compressor Running Time		Secs	
25	Compressor Starts		-	
26	Cond Differential Wtr Press		kPa	
27	Condenser Entering Water Temperature		°C	
28	Condenser Leaving Water Temperature		°C	
29	Condenser Refrigerant Pressure		kPa	
30	Condenser Saturated Rfgt Temp		°C	
31	Differential Refrigerant Pressure		kPa	
32	Evap Differential Wtr Press		kPa	

Object Identifier	Object Name	Description	Units	Configuration Dependency
33	Evaporator Entering Water Temperature		°C	
34	Evaporator Leaving Water Temperature		°C	
35	Evaporator Refrigerant Pressure		kPa	
36	Evaporator Saturated Rfgt Temp		°C	
37	External Base Loading Setpoint		%	
38	External Chilled Water Setpoint		°C	
39	External Demand Limit Setpoint		%	
40	Front Panel Base Loading Setpoint		%	
41	Front Panel Chilled Water Setpoint		°C	
42	Front Panel Demand Limit Setpoint		%	
43	Front Panel Hot Water Setpoint		°C	
44	IGV Percent Open		%	
45	Motor Winding Temp #1		°C	
46	Motor Winding Temp #2		°C	
47	Motor Winding Temp #3		°C	
48	Number of Circuits		Not applicable	
49	Number of Compressors, Circuit 1		Not applicable	
50	Number of Compressors, Circuit 2		Not applicable	
51	Outdoor Air Temperature		°C	
52	Refrigerant Monitor		ppm	
53	Unit Power Consumption		kW	
54	AFD Calculated Input Voltage		V	
55	Condenser Entering Water Pressure		kPa	
56	Condenser Leaving Water Pressure		kPa	
57	Evaporator Entering Water Pressure		kPa	
58	Evaporator Leaving Water Pressure		kPa	
59	Chiller Load Command		%	

Object Identifier	Object Name	Description	Units	Relinquish Default	Valid Range
1	BAS Base Loading Setpoint		Real	50%	20-100%
2	BAS Chilled Water Setpoint		Real	6.7°C/44°F	-17.78° to 23.9°C (0°F to 75°F)
3	BAS Demand Limit Setpoint		Real	100% RLA	20 to 120%
4	BAS Hot Water Setpoint		Real	120°F (48.9°C)	80°F to 140°F (26.7°C to 60°C)

Object Identifier	Object Name	Description	Object Status	Relinquish Default
10	Alarm Present		0 = No 1 = Yes	0 = No
13	Base Loading		0 = Inactive 1 = Active	0 = Inactive
14	Chiller Running State		0 = No 1 = Yes	0 = No
66	Condenser Water Flow		0 = No Flow 1 = Flow	0 = No Flow
70	Condenser Water Pump Command		0 = Off (Pump Off) 1 = On (Pump On)	0 = Off
75	Emergency Stop		0 = Inactive 1 = Active	0 = Inactive
79	Evaporator Water Flow		0 = No Flow 1 = Flow	0 = No Flow
83	Evaporator Water Pump Command		0 = Off (Pump Off) 1 = On (Pump On)	0 = Off
88	Front Panel Base Loading Command		0 = Auto 1 = On	0 = Auto
89	Head Relief Request Relay		0 = Inactive 1 = Active	0 = Inactive
104	Limit Mode Relay Status		0 = Inactive 1 = Active	0 = Inactive
105	Local Setpoint Control		0 = No 1 = Yes	0 = No
114	Manual Override Exists		0 = No 1 = Yes	0 = No
115	Maximum Capacity Relay		0 = Inactive 1 = Active	0 = Inactive
139	Run Enable		0 = No 1 = Yes	0 = No

Object Identifier	Object Name	Description	Property Values	Relinquish Default	Valid Range
1	BAS Base Loading Enable		0 = Disable 1 = Enable	0 = Disable	0 or 1
2	BAS Diagnostic Reset		0=false (no reset); 1=true (can reset)	0 = False	0 or 1

Object Identifier	Object Name	Object Status	Relinquish Default	Diagnostic Reset Level
1	AFD Comm Loss: Main Processor	0 = Off 1 = On	0 = Off	Remote
2	AFD Failure to Arm or Start	0 = Off 1 = On	0 = Off	Local
3	AFD Fault	0 = Off 1 = On	0 = Off	Local
4	AFD Ground Fault	0 = Off 1 = On	0 = Off	Local
5	AFD Interrupt Failure	0 = Off 1 = On	0 = Off	Local
6	AFD Mains Failure	0 = Off 1 = On	0 = Off	Local
7	AFD Motor Current Overload	0 = Off 1 = On	0 = Off	Local
8	AFD Safe Stop	0 = Off 1 = On	0 = Off	Local
9	AFD Short Circuit	0 = Off 1 = On	0 = Off	Local
11	BAS Communication Lost	0 = Off 1 = On	0 = Off	Remote
12	BAS Failed to Establish Communication	0 = Off 1 = On	0 = Off	Remote
15	Comm Loss: Adaptive Frequency Drive	0 = Off 1 = On	0 = Off	Local
16	Comm Loss: Chiller % Capacity Output	0 = Off 1 = On	0 = Off	Remote
17	Comm Loss: Cprsr Discharge Rfgt Temp	0 = Off 1 = On	0 = Off	Remote
19	Comm Loss: Condenser Rfgt Pressure	0 = Off 1 = On	0 = Off	Remote
20	Comm Loss: Condenser Rfgt Pressure Output	0 = Off 1 = On	0 = Off	Remote
21	Comm Loss: Condenser Entering Water Temp	0 = Off 1 = On	0 = Off	Remote
22	Comm Loss: Condenser Leaving Water Temp	0 = Off 1 = On	0 = Off	Remote

Object Identifier	Object Name	Object Status	Relinquish Default	Diagnostic Reset Level
23	Comm Loss: Condenser Liquid Level Sensor	0 = Off 1 = On	0 = Off	Remote
24	Comm Loss: Condenser Water Flow Measurement Sensor	0 = Off 1 = On	0 = Off	Remote
25	Comm Loss: Condenser Water Flow Switch	0 = Off 1 = On	0 = Off	Remote
26	Comm Loss: Condenser Water Pump Relay	0 = Off 1 = On	0 = Off	Remote
27	Comm Loss: Drive Cooling Supply Temperature	0 = Off 1 = On	0 = Off	Remote
28	Comm Loss: Drive Cooling Valve	0 = Off 1 = On	0 = Off	Remote
29	Comm Loss: Economizer Pressure	0 = Off 1 = On	0 = Off	Remote
30	Comm Loss: Economizer Temperature	0 = Off 1 = On	0 = Off	Remote
31	Comm Loss: Economizer Valve	0 = Off 1 = On	0 = Off	Remote
32	Comm Loss: Emergency Stop	0 = Off 1 = On	0 = Off	Remote
33	Comm Loss: Evap Entering Water Temp	0 = Off 1 = On	0 = Off	Remote
34	Comm Loss: Evap Leaving Water Temp	0 = Off 1 = On	0 = Off	Remote
35	Comm Loss: Evaporator EXV	0 = Off 1 = On	0 = Off	Remote
36	Comm Loss: Evaporator Refrigerant Pressure	0 = Off 1 = On	0 = Off	Remote
37	Comm Loss: Evaporator Water Flow Measurement Sensor	0 = Off 1 = On	0 = Off	Remote
38	Comm Loss: Evaporator Water Flow Switch	0 = Off 1 = On	0 = Off	Remote
39	Comm Loss: Evaporator Water Pump Relay	0 = Off 1 = On	0 = Off	Remote
40	Comm Loss: Ext Base Loading Command	0 = Off 1 = On	0 = Off	Remote

Object Identifier	Object Name	Object Status	Relinquish Default	Diagnostic Reset Level
41	Comm Loss: Ext Base Loading Setpoint	0 = Off 1 = On	0 = Off	Remote
42	Comm Loss: Ext Chilled/Hot Water Setpoint	0 = Off 1 = On	0 = Off	Remote
43	Comm Loss: Ext Demand Limit Setpoint	0 = Off 1 = On	0 = Off	Remote
44	Comm Loss: External Auto/Stop	0 = Off 1 = On	0 = Off	Remote
45	Comm Loss: External Hot Water Command	0 = Off 1 = On	0 = Off	Remote
46	Comm Loss: External Ice Building Command	0 = Off 1 = On	0 = Off	Remote
47	Comm Loss: Ice Building Status Relay	0 = Off 1 = On	0 = Off	Remote
48	Comm Loss: IGV First Stage Actuator	0 = Off 1 = On	0 = Off	Remote
49	Comm Loss: Local BAS Interface	0 = Off 1 = On	0 = Off	Remote
50	Comm Loss: Magnetic Bearing Controller	0 = Off 1 = On	0 = Off	Remote
51	Comm Loss: MBC Cooling Valve	0 = Off 1 = On	0 = Off	Remote
52	Comm Loss: Motor Cooling Valve	0 = Off 1 = On	0 = Off	Remote
53	Comm Loss: Motor Winding Temperature 1	0 = Off 1 = On	0 = Off	Remote
54	Comm Loss: Motor Winding Temperature 2	0 = Off 1 = On	0 = Off	Remote
55	Comm Loss: Motor Winding Temperature 3	0 = Off 1 = On	0 = Off	Remote
56	Comm Loss: Outdoor Air Temperature	0 = Off 1 = On	0 = Off	Remote
57	Comm Loss: Programmable Relay Board 1	0 = Off 1 = On	0 = Off	Remote
58	Comm Loss: Programmable Relay Board 2	0 = Off 1 = On	0 = Off	Remote

Object Identifier	Object Name	Object Status	Relinquish Default	Diagnostic Reset Level
59	Comm Loss: Refrigerant Monitor Input	0 = Off 1 = On	0 = Off	Remote
60	Comm Loss: UPS Fault	0 = Off 1 = On	0 = Off	Remote
61	Compressor Discharge Refrigerant Temp Sensor	0 = Off 1 = On	0 = Off	Remote
62	Condenser Entering Water Temp Sensor	0 = Off 1 = On	0 = Off	Remote
63	Condenser Leaving Water Temp Sensor	0 = Off 1 = On	0 = Off	Remote
64	Condenser Liquid Level Sensor	0 = Off 1 = On	0 = Off	Remote
65	Condenser Refrigerant Pressure Sensor	0 = Off 1 = On	0 = Off	Remote
67	Condenser Water Flow Lost	0 = Off 1 = On	0 = Off	Remote
68	Condenser Water Flow Measurement Sensor	0 = Off 1 = On	0 = Off	Remote
69	Condenser Water Flow Overdue	0 = Off 1 = On	0 = Off	Remote
71	Drive Cooling Supply Temperature Sensor	0 = Off 1 = On	0 = Off	Remote
72	Economizer Pressure Sensor	0 = Off 1 = On	0 = Off	Remote
73	Economizer Temperature Sensor	0 = Off 1 = On	0 = Off	Remote
74	Emergency Stop	0 = Off 1 = On	0 = Off	Local
76	Evaporator Entering Water Temp Sensor	0 = Off 1 = On	0 = Off	Remote
77	Evaporator Leaving Water Temp Sensor	0 = Off 1 = On	0 = Off	Remote
78	Evaporator Refrigerant Pressure Sensor	0 = Off 1 = On	0 = Off	Remote
80	Evaporator Water Flow Lost	0 = Off 1 = On	0 = Off	Remote

Object Identifier	Object Name	Object Status	Relinquish Default	Diagnostic Reset Level
81	Evaporator Water Flow Measurement Sensor	0 = Off 1 = On	0 = Off	Remote
82	Evaporator Water Flow Overdue	0 = Off 1 = On	0 = Off	Remote
84	Extended Compressor Surge	0 = Off 1 = On	0 = Off	Remote
85	External Base Loading Setpoint	0 = Off 1 = On	0 = Off	Remote
86	External Chilled/Hot Water Setpoint	0 = Off 1 = On	0 = Off	Remote
87	External Demand Limit Setpoint	0 = Off 1 = On	0 = Off	Remote
90	High Compressor Refrigerant Discharge Temperature	0 = Off 1 = On	0 = Off	Remote
91	High Condenser Liquid Level	0 = Off 1 = On	0 = Off	Remote
92	High Condenser Pressure	0 = Off 1 = On	0 = Off	Local
93	High Evaporator Refrigerant Pressure	0 = Off 1 = On	0 = Off	Local
94	High Evaporator Water Temperature	0 = Off 1 = On	0 = Off	Remote
95	High Motor Winding Temperature 1	0 = Off 1 = On	0 = Off	Local
96	High Motor Winding Temperature 2	0 = Off 1 = On	0 = Off	Local
97	High Motor Winding Temperature 3	0 = Off 1 = On	0 = Off	Local
98	High Vacuum Lockout	0 = Off 1 = On	0 = Off	Remote
99	Inverted Condenser Approach Temperature	0 = Off 1 = On	0 = Off	Remote
100	Inverted Condenser Water Temperature	0 = Off 1 = On	0 = Off	Remote
101	Inverted Evaporator Approach Temperature	0 = Off 1 = On	0 = Off	Remote

Object Identifier	Object Name	Object Status	Relinquish Default	Diagnostic Reset Level
102	Inverted Evaporator Water Temperature	0 = Off 1 = On	0 = Off	Remote
103	LCI-C Software Mismatch: Use BAS Tool	0 = Off 1 = On	0 = Off	Remote
106	Loss of Drive Cooling Control	0 = Off 1 = On	0 = Off	Remote
107	Loss of MBC Cooling Control	0 = Off 1 = On	0 = Off	Remote
108	Loss of Motor Cooling Control	0 = Off 1 = On	0 = Off	Remote
109	Low Condenser Liquid Level	0 = Off 1 = On	0 = Off	Remote
110	Low Evap Leaving Water Temp: Unit On	0 = Off 1 = On	0 = Off	Remote
111	Low Evap Leaving Water Temp: Unit Off	0 = Off 1 = On	0 = Off	Remote
112	Low Evaporator Refrigerant Temperature	0 = Off 1 = On	0 = Off	Local
113	Low Evaporator Water Flow	0 = Off 1 = On	0 = Off	Remote
116	MBC Bearing Temperature 1	0 = Off 1 = On	0 = Off	Remote
117	MBC Bearing Temperature 2	0 = Off 1 = On	0 = Off	Remote
118	MBC Failed Centering	0 = Off 1 = On	0 = Off	Local
119	MBC Failed Clearance Check	0 = Off 1 = On	0 = Off	Remote
121	MBC Not Ready To Rotate	0 = Off 1 = On	0 = Off	Remote
122	MBC Over Voltage	0 = Off 1 = On	0 = Off	Remote
123	MBC Overspeed	0 = Off 1 = On	0 = Off	Remote
124	MBC Parameter Table Not Set	0 = Off 1 = On	0 = Off	Local

Object Identifier	Object Name	Object Status	Relinquish Default	Diagnostic Reset Level
125	MBC PCB Temperature	0 = Off 1 = On	0 = Off	Remote
126	MBC Rotation Detected Without Levitation	0 = Off 1 = On	0 = Off	Remote
128	MBC Rotor Unbalance Alarm	0 = Off 1 = On	0 = Off	Remote
129	MBC Shutdown Request	0 = Off 1 = On	0 = Off	Remote
130	MBC Speed Sensor	0 = Off 1 = On	0 = Off	Remote
131	MBC Under Voltage	0 = Off 1 = On	0 = Off	Remote
132	Motor Winding Temperature 1 Sensor	0 = Off 1 = On	0 = Off	Remote
133	Motor Winding Temperature 2 Sensor	0 = Off 1 = On	0 = Off	Remote
134	Motor Winding Temperature 3 Sensor	0 = Off 1 = On	0 = Off	Remote
135	MP: Invalid Configuration	0 = Off 1 = On	0 = Off	N/A
136	MP: Reset Has Occurred	0 = Off 1 = On	0 = Off	Remote
137	Outdoor Air Temp Sensor	0 = Off 1 = On	0 = Off	Remote
138	Refrigerant Monitor Input	0 = Off 1 = On	0 = Off	Remote
140	Software Error 1001: Call Trane Service	0 = Off 1 = On	0 = Off	Local
141	Software Error 1002: Call Trane Service	0 = Off 1 = On	0 = Off	Local
142	Software Error 1003: Call Trane Service	0 = Off 1 = On	0 = Off	Local
144	Unexpected Starter Shutdown	0 = Off 1 = On	0 = Off	Remote
145	UPS Fault	0 = Off 1 = On	0 = Off	Remote

Object Identifier	Object Name	Object Status	Relinquish Default	Diagnostic Reset Level
146	AFD UC800 Speed Mismatch	0 = Off 1 = On	0 = Off	Local
147	MBC Not Centered	0 = Off 1 = On	0 = Off	
148	Loss of Evaporator EXV Control	0 = Off 1 = On	0 = Off	
149	MBC Rotor Elongation	0 = Off 1 = On	0 = Off	
150	Comm Loss: Evaporator Entering Water Pressure	0 = Off 1 = On	0 = Off	
151	Comm Loss: Evaporator Leaving Water Pressure	0 = Off 1 = On	0 = Off	
152	Comm Loss: Condenser Entering Water Pressure	0 = Off 1 = On	0 = Off	
153	Comm Loss: Condenser Leaving Water Pressure	0 = Off 1 = On	0 = Off	
154	Evaporator Entering Water Pressure	0 = Off 1 = On	0 = Off	
155	Evaporator Leaving Water Pressure	0 = Off 1 = On	0 = Off	
156	Condenser Entering Water Pressure	0 = Off 1 = On	0 = Off	
157	Condenser Leaving Water Pressure	0 = Off 1 = On	0 = Off	

Object Identifier	Object Name	Description	Object States	Relinquish Defaults
1	Chiller Control Mode		1 = Cool 2 = Heat 3 = Ice	1 = Cool
2	Active Base Loading Setpoint Source		1 = Front Panel 2 = External 3 = Ice Machine 4 = BAS	1 = Front Panel
3	Active Chilled Water Setpoint Source		1 = Front Panel 2 = External 3 = Ice Machine 4 = BAS	1 = Front Panel
4	Active Demand Limit Setpoint Source		1 = Front Panel 2 = External 3 = Ice Machine 4 = BAS	1 = Front Panel
5	Active Hot Water Setpoint Source		1 = Front Panel 2 = External 3 = Ice Machine 4 = BAS	1 = Front Panel
6	Chiller Running Status		1 = Not Running 2 = Starting 3 = Running 4 = Stopping	1 = Not Running
7	Compressor Running		0 = Off 1 = On	0 = Off
8	External Auto Stop		0 = Stop 1 = Auto	0 = Stop
9	Front Panel Auto/Stop		0 = Stop 1 = Auto	0 = Stop
10	Front Panel Chiller Mode		1 = Cool 2 = Heat 3 = Ice	1 = Cool
11	Setpoint Source		1 = BAS/Ext/FP 2 = Ext/FP 3 = Front Panel	1 = BAS/Ext/FP
12	Refrigerant Type		5 = R134a 13 = R513A	5 = R134a

Object Identifier	Object Name	Description	Property Values	Relinquish Default	Valid Range
1	BAS Chiller Auto Stop Command		1= Stop 2= Auto	2= Auto	1 or 2
2	BAS Chiller Mode Command		1=cool; 2=heat 3=ice	1= Cool	1 to 3

Object Naming Conventions

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Suffix	Description
Status	Points with the Status suffix are defined as read-only. The status point reports the value being used by the controller.
Local	Points with the Local suffix are defined as read-only. The local point reports values associated with controller sensors, both wired and wireless. The local value may or may not be actively used by the controller, depending on the presence or absence of a communicated value (BAS). When both a local and communicated value exist, the communicated value is used.
Active	Points with the Active suffix are defined as read-only. Points designated as active are normally the result of the arbitration between a communicated value(BAS) and at least one value local to the equipment, such as a sensor or default setpoint. The active point reports the value being input to the controller.
Setpoint	Points with the Setpoint suffix are defined as either read-only or read/write. For BACnet®, the binary input, analog input and multi-state input points are all read-only. These setpoints report the value currently in use by the controller. The analog value, binary value and multi-state value points are all read/write. These points are provided for use by the building automation system (BAS). When used, these points are written internally to arbitration logic. This defines the interaction with hardwired points, editable software configuration points and the relinquish default value/state. Refer to the Appendix for additional information.
Input	Points with the Input suffix are defined as read-only. These points normally reflect the status of a sensor input, either hardwired or communicating wirelessly (Air-Fi®). However, the input point reflects the arbitrated result of the controller sensor input and a communicated value, if present. When both a controller sensor and communicated value exist, the controller will use and report the communicated value.
Arbitrator	Points with the "Arbitrator" suffix are to be used as read-only. The arbitrator prioritizes inputs from communicating points, hardwired points and stored defaults points. The priority array of the arbitration point displays each of the values provided, including the active status, indicating which of the input sources is being used. Refer to the Appendix for additional information.
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Command	Points with the Command suffix are defined as read/write. These points are written to change the default behavior of the controller. Once written, these point values may be persisted.
Request	Points with the Request suffix are defined as read/write. These points are written to request a change the operating behavior of the controller.

Object Data Points and Diagnostic Data Points

The following tables are sorted as follows:

- Tables are listed by input/output type and sorted by object identifier. These tables provide the user with the unit's type for each object type.
- Tables are sorted by object name and provide a complete list of object names, types, values/ranges, and descriptions.

  Note: Not all points are available to the user. The available data points are defined during self-configuration and are dependent on the type of equipment.

Register Address	Object Name	Description	Register Type	Register Value	Valid Range
40001	BAS Chiller Auto Stop Command		Binary	0 = Stop 1 = Auto	0, 1
40002	BAS Chiller Mode Command		Enumeration	0= Cool 1= Heat 2= Ice	0 to 2
40003	BAS Chilled Water Setpoint		Temperature		0°F to 75°F depending on installed options (-17.78°C to 23.9°C)
40004	BAS Demand Limit Setpoint		Percent(b)		20% to 100%
40005	BAS Hot Water Setpoint		Temperature		80°F to 140°F (26.7°C to 60°C)
40006	BAS Base Loading Setpoint		Percent		20% to 100%
40007	BAS Base Loading Enable		Binary	0 = Disable 1 = Enable	0, 1
40008	BAS Diagnostic Reset		Binary	0 = False 1 = True	0, 1

Register Address	Object name	Description	Register Type	Register Value	Valid Range
30001	Software Type		Not applicable		
30002	Software Revision		Not applicable		
30003	Active Base Loading Setpoint		Percent		
30004	Active Cool/Heat Setpoint Temperature		Temp		
30005	Active Demand Limit Setpoint		Percent		
30006	AFD Average Motor Current % RLA		Percent		
30007	AFD Calculated Motor Voltage		Voltage		
30008	AFD DC Bus Voltage		Voltage		
30009	AFD Frequency Command		Percent		
30010	AFD Heatsink Temperature		Temp		
30011	AFD Motor Current U		Current		
30012	AFD Motor Current U % RLA		Percent		
30013	AFD Motor Current V		Current		
30014	AFD Motor Current V % RLA		Percent		
30015	AFD Motor Current W		Current		
30016	AFD Motor Current W % RLA		Percent		
30017	AFD Output Power		Power		
30018	AFD Percent Speed		Percent		
30019	Approx Cond Water Flow		Flow, water		
30020	Approx Evap Water Flow		Flow, water		
30021	Calculated Chiller Capacity		Power		
30022	Compressor Bearing Temperature 1		Temp		
30023	Compressor Bearing Temperature 2		Temp		
30024	Compressor Refrigerant Discharge Temperature		Temp		
30029	Cond Differential Wtr Press		Differential Pressure		
30030	Condenser Entering Water Temperature		Temp		
30031	Condenser Leaving Water Temperature		Temp		
30032	Condenser Refrigerant Pressure		Pressure		
30033	Condenser Saturated Rfgt Temp		Temp		
30034	Differential Refrigerant Pressure		Differential Pressure		
30035	Evap Differential Wtr Press		Differential Pressure		
30036	Evaporator Entering Water Temperature		Temp		
30037	Evaporator Leaving Water Temperature		Temp		
30038	Evaporator Refrigerant Pressure		Pressure		
30039	Evaporator Saturated Rfgt Temp		Temp		
30040	External Base Loading Setpoint		Percent		
30041	External Chilled Water Setpoint		Temp		

Register Address	Object name	Description	Register Type	Register Value	Valid Range
30042	External Demand Limit Setpoint		Percent		
30043	Front Panel Base Loading Setpoint		Percent		
30044	Front Panel Chilled Water Setpoint		Temp		
30045	Front Panel Demand Limit Setpoint		Percent		
30046	Front Panel Hot Water Setpoint		Temp		
30047	IGV Percent Open		Percent		
30048	Motor Winding Temp #1		Temp		
30049	Motor Winding Temp #2		Temp		
30050	Motor Winding Temp #3		Temp		
30051	Number of Circuits		Count		
30052	Number of Compressors, Circuit 1		Count		
30053	Number of Compressors, Circuit 2		Count		
30054	Outdoor Air Temperature		Temp		
30055	Refrigerant Monitor		Concentration		
30056	Unit Power Consumption		Power		
30060	Alarm Present		BINARY		
30061	Base Loading		BINARY		
30062	Chiller Running State		BINARY		
30063	Condenser Water Flow		BINARY		
30064	Condenser Water Pump Command		BINARY		
30065	Emergency Stop		BINARY		
30066	Evaporator Water Flow		BINARY		
30067	Evaporator Water Pump Command		BINARY		
30068	Front Panel Base Loading Command		BINARY		
30069	Head Relief Request Relay		BINARY		
30070	Limit Mode Relay Status		BINARY		
30071	Local Setpoint Control		BINARY		
30072	Manual Override Exists		BINARY		
30073	Maximum Capacity Relay		BINARY		
30074	Run Enable		BINARY		
30077	Active Base Loading Setpoint Source		Enum	0 = Front Panel 1 = External 2 = Ice Machine 3 = BAS	

Register Address	Object name	Description	Register Type	Register Value	Valid Range
30078	Active Chilled Water Setpoint Source		Enum	0 = Front Panel 1 = External 2 = Ice Machine 3 = BAS	
30079	Active Demand Limit Setpoint Source		Enum	0 = Front Panel 1 = External 2 = Ice Machine 3 = BAS	
30080	Active Hot Water Setpoint Source		Enum	0 = Front Panel 1 = External 2 = Ice Machine 3 = BAS	
30081	Chiller Control Mode		Enum	0 = Cool 1 = Heat 2 = Ice	
30082	Chiller Running Status		Enum	0 = Not Running 1 = Starting 2 = Running 3 = Stopping	
30083	Compressor Running		Enum	0 = Stopped 1 = Running 2 = Alarm	
30084	External Auto Stop		BINARY		
30085	Front Panel Auto/Stop		BINARY		
30086	Front Panel Chiller Mode		Enum	0 = Cool 1 = Heat 2 = Ice	
30087	Setpoint Source		Enum	0 = BAS/Ext/FP 1 = Ext/FP 2 = Front Panel	
30090	Refrigerant Type		Enum	4 = R134a 12 = R513A	
30025, 30026	Compressor Running Time		Time		
30027, 30028	Compressor Starts		Count		
30088/30089	Last Logged Diagnostic Spec ID		Enum		
30091	AFD Calculated Input Voltage		Voltage		
30092	Condenser Entering Water Pressure		Pressure		

Register Address	Object name	Description	Register Type	Register Value	Valid Range
30093	Condenser Leaving Water Pressure		Pressure		
30094	Evaporator Entering Water Pressure		Pressure		
30095	Evaporator Leaving Water Pressure		Pressure		
30096	Chiller Load Command		Percent		