



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.

Symbio™ 800 Integration Points List

BACnet®

CTV-Duplex (UC800)

Date: 12/6/2024

Reference Document: BAS-SVP083*-EN



Object Identifier	Object Name	Description	Units	Configuration Dependency
1	Unit Average Line Current		Real	
2	Active Current Limit Setpoint		Real	
3	Active Base Loading Setpt		Real	
4	Unit Power Consumption		Real	
5	Calculated Chiller Capacity		Real	
7	Active Cool/Heat Setpoint Temperature		Real	
8	Evap Leaving Water Temp		Real	
9	Evap Entering Water Temp		Real	
10	Cond Entering Water Temp		Real	
11	Cond Leaving Water Temp		Real	
12	Approx Evap Water Flow		Real	
13	Evap Differential Wtr Press		Real	
14	Approx Cond Water Flow		Real	
15	Cond Differential Wtr Press		Real	
16	Second Condenser Entering Water Temperature		Real	
17	Second Condenser Leaving Water Temperature		Real	
18	AFD Last Diagnostic Code Ckt1		Real	
19	Front Panel Chilled Water Setpt		Real	
20	Front Panel Current Limit Setpoint		Real	
21	Front Panel Hot Water Setpt		Real	
22	Front Panel Base Loading Setpt		Real	
23	Ext Chilled Wtr Setpt		Real	
24	Ext Current Limit Setpt		Real	
25	External Base Loading Setpoint		Real	
26	Refrigerant Monitor		Real	
27	Evaporator Refrigerant Pressure Ckt1		Real	
28	Condenser Refrigerant Pressure Ckt1		Real	
30	Oil Tank Pressure Ckt1		Real	
31	Oil Pump Discharge Pressure Ckt1		Real	
32	Oil Differential Pressure Ckt1		Real	
33	Oil Tank Temperature Ckt1		Real	
34	Evaporator Saturated Rfgt Temp Ckt1		Real	

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Object Identifier	Object Name	Description	Units	Configuration Dependency
35	Condenser Saturated Rfght Temp Ckt1		Real	
36	Compressor Rfght Discharge Temp Ckt1		Real	
37	IGV1 Percent Open Ckt1		Real	
38	IGV2 Percent Open Ckt2		Real	
39	Purge Carbon Tank Temp Ckt1		Real	
40	Purge Liquid Temperature Ckt1		Real	
41	Purge Rfght Compressor Suction Temp Ckt1		Real	
42	Time Until Next Purge Run Ckt1		Real	
43	Pumpout Chiller On-7 Days Ckt1		Real	
44	Pumpout Chiller Off-7 Days Ckt1		Real	
45	Daily Pumpout-24 Hours Ckt1		Real	
46	Pumpout-Life Ckt1		Real	
47	Refrigerant-Life Ckt1		Real	
48	Compressor Starts Ckt1		Real	
49	Compressor Running Time Ckt1		Real	
50	Starter Voltage Phase AB Ckt1		Real	
51	Starter Voltage Phase BC ckt1		Real	
52	Starter Voltage Phase CA Ckt1		Real	
53	Starter Average Phase Voltage Ckt1		Real	
54	Starter Current L1 Ckt1		Real	
55	Starter Current L2 Ckt1		Real	
56	Starter Current L3 Ckt1		Real	
57	Average Line Current Ckt1		Real	
58	Starter Current L1 % RLA Ckt1		Real	
59	Starter Current L1 % RLA Ckt1		Real	
60	Starter Current L1 % RLA Ckt1		Real	
61	Average Line Current % RLA Ckt1			
62	Starter Power Consumption Ckt1			
63	Starter Load Power Factor Ckt1			
64	Inboard Bearing Temperature Ckt1			
65	Outboard Bearing Temperature Ckt1			
66	Motor Winding Temperature 1 Ckt1			

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Object Identifier	Object Name	Description	Units	Configuration Dependency
67	Motor Winding Temperature 2 Ckt1			
68	Motor Winding Temperature 3 Ckt1			
69	Frequency Ckt1			
70	AFD Transistor Temperature Ckt1			
71	Evaporator Refrigerant Pressure Ckt2			
72	Condenser Refrigerant Pressure Ckt2			
74	Oil Tank Pressure Ckt2			
75	Oil Pump Discharge Pressure Ckt2			
76	Oil Differential Pressure Ckt2			
77	Oil Tank Temperature Ckt2			
78	Evaporator Saturated Rfgt Temp Ckt2			
79	Condenser Saturated Rfgt Temp Ckt2			
80	Compressor Rfgt Discharge Temp Ckt2			
81	IGV 1 Percent Open Ckt2			
82	IGV 2 Percent Open Ckt2			
83	Purge Carbon Tank Temp Ckt2			
84	Purge Liquid Tank Temp Ckt2			
85	Purge Rfgt Compressor Suction Temp Ckt2			
86	Time Until Next Purge Run Ckt2			
87	Pumpout Chiller On 7 Days Ckt2			
88	Pumpout Chiller Off 7 Days Ckt2			
89	Daily Pumpout-24 Hours Ckt2			
90	Pumpout-Life Ckt2			
91	Refrigeration-Line Ckt2			
92	Compressor Starts Ckt2			
93	Compressor Running Time Ckt2			
94	Starter Voltage Phase AB Ckt2			
95	Starter Voltage Phase BC Ckt2			
96	Starter Voltage Phase CA Ckt2			
97	Starter Average Phase Voltage Ckt2			
98	Starter Current L1 Ckt2			
99	Starter Current L2 Ckt2			

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Object Identifier	Object Name	Description	Units	Configuration Dependency
100	Starter Current L3 Ckt2			
101	Average Line Current Ckt2			
102	Starter Current L1 % RLA Ckt2			
103	Starter Current L2 % RLA Ckt2			
104	Starter Current L3 % RLA Ckt2			
105	Average Line Current % RLA Ckt2			
106	Starter Power Consumption Ckt2			
107	Starter Load Power Factor Ckt2			
108	Inboard Bearing Temperature Ckt2			
109	Outboard Bearing Temperature Ckt2			
110	Motor Winding Temperature 1 Ckt2			
111	Motor Winding Temperature 2 Ckt2			
112	Motor Winding Temperature 3 Ckt2			
113	Frequency Ckt2			
114	AFD Transistor Temperature Ckt2			
115	AFD Last Diagnostic Code Ckt2			
116	Differential Refrigerant Pressure Ckt1			
117	Differential Refrigerant Pressure Ckt2			
118	AFD Average Input Current Ckt1			
119	AFD Input Current L1 Ckt1			
120	AFD Input Current L2 Ckt1			
121	AFD Input Current L3 Ckt1			
122	AFD Input Frequency Ckt1			
123	AFD Output Voltage Ckt1			
124	AFD Input Power Factor Ckt1			
125	AFD Inverter Base Temperature Ckt1			
126	AFD Rectifier Base Temperature Ckt1			
127	AFD Output Power Ckt1			
128	AFD Average Input Current Ckt2			
129	AFD Input Current L1 Ckt2			
130	AFD Input Current L2 Ckt2			
131	AFD Input Current L3 Ckt2			

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Object Identifier	Object Name	Description	Units	Configuration Dependency
132	AFD Input Frequency Ckt2			
133	AFD Output Voltage Ckt2			
134	AFD Input Power Factor Ckt2			
135	AFD Inverter Base Temperature Ckt2			
136	AFD Rectifier Base Temperature Ckt2			
137	AFD Output Power Ckt2			
138	Frequency Command Ckt1			
139	Frequency Command Ckt2			
140	AFD DC Bus voltage Ckt1			
141	AFD DC Bus voltage Ckt2			
142	Condenser Entering Water Pressure			
143	Condenser Leaving Water Pressure			
144	Evaporator Entering Water Pressure			
145	Evaporator Entering Water Pressure			
334	Outboard Bearing Pad Temperature #1 Ckt1			
335	Outboard Bearing Pad Temperature #2 Ckt1			
336	Outboard Bearing Pad Temperature #3 Ckt1			
337	Outboard Bearing Pad Temperature #1 Ckt2			
338	Outboard Bearing Pad Temperature #2 Ckt2			
339	Outboard Bearing Pad Temperature #3 Ckt2			

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

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Object Identifier	Object Name	Description	Object Status	Configuration Dependency
1	Chiller Running		0 = No (Not Running) 1 = Yes (Running) Inactive Active	
2	Evaporator Pump Control		0 = Off (Pump Off) 1 = On (Pump On) Inactive Active	
3	Evaporator Water Flow		0 = No Flow 1 = Flow Inactive Active	
4	Condenser Pump Control		0 = Off (Pump Off) 1 = On (Pump On) Inactive Active	
5	Condenser Water Flow		0 = No Flow 1 = Flow Inactive Active	
6	Front Panel Base Loading Command		0 = Auto 1 = On	
7	Emergency Stop		0 = Off 1 = On	
8	Manual Override Exists		0 = False 1 = True	
9	Base Loading		0 = Inactive 1 = Active	
10	Alarm Present		0 = No 1 = Yes	
11	Chiller In Auto		0 = No 1 = Yes	
12	Local Setpoint Control		0 = No 1 = Yes	
13	Maximum Capacity Relay		0 = Off 1 = On	

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Object Identifier	Object Name	Description	Object Status	Configuration Dependency
14	Limit Mode Relay Status		0 = Inactive 1 = Active	
15	Head Relief Request Relay		0 = Off 1 = On	
17	Purge Compressor Relay Ckt1		0 = Off 1 = On	
18	Pumpout Relay Ckt1		0 = Off 1 = On	
19	Purge Regen Valve Solenoid Ckt1		0 = Off 1 = On	
20	Purge Compressor Relay Ckt2		0 = Off 1 = On	
21	Pumpout Relay Ckt2		0 = Off 1 = On	
22	Purge Regen Valve Solenoid Ckt2		0 = Off 1 = On	
23	Circuit Available Ckt1		0 = No 1 = Yes	
24	Circuit Available Ckt2		0 = No 1 = Yes	c

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Object Identifier	Object Name	Object Status
501	Started Did Not Transition	0 = Off 1 = On
502	Starter Did Not Fully Accelerate	0 = Off 1 = On
503	Phase Reversal	0 = Off 1 = On
504	Start Dry Run Test	0 = Off 1 = On
505	Phase Loss	0 = Off 1 = On
506	Power Loss	0 = Off 1 = On
507	Momentary Power Loss	0 = Off 1 = On
508	Severe Current Unbalance	0 = Off 1 = On
509	Starter Fault Type 1	0 = Off 1 = On
510	Starter Fault Type 2	0 = Off 1 = On
511	Starter Fault Type 3	0 = Off 1 = On
512	Transition Complete Input Shorted	0 = Off 1 = On
513	At Speed Input Shorted	0 = Off 1 = On
514	Transition Complete Input Opened	0 = Off 1 = On
515	At Speed Input Opened	0 = Off 1 = On
516	Motor Current Overload	0 = Off 1 = On
517	Compressor Did Not Accelerate: Shutdown	0 = Off 1 = On
518	Cprsr Did Not Accelerate: Transition	0 = Off 1 = On
519	Starter Contactor Interrupt Failure	0 = Off 1 = On

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Object Identifier	Object Name	Object Status
520	Starter Module Memory Error Type 1	0 = Off 1 = On
521	Starter Module Memory Error Type 2	0 = Off 1 = On
522	Starter Comm Loss: Main Processor	0 = Off 1 = On
536	AFD Power Loss	0 = Off 1 = On
537	AFD Start Inhibited	0 = Off 1 = On
538	AFD Motor Current Overload	0 = Off 1 = On
539	AFD Motor Short	0 = Off 1 = On
540	AFD Instantaneous Current Overload	0 = Off 1 = On
541	AFD High Temperature	0 = Off 1 = On
542	AFD Output Phase Loss	0 = Off 1 = On
543	AFD Ground Fault	0 = Off 1 = On
544	HPC/High AFD Heat Sink Water Pressure	0 = Off 1 = On
545	AFD Communication Loss: Main Processor	0 = Off 1 = On
546	AFD High Bus Voltage	0 = Off 1 = On
547	AFD Control Board Memory Error Type 2	0 = Off 1 = On
548	AFD General Failure	0 = Off 1 = On
549	AFD Fatal Software Error	0 = Off 1 = On
550	AFD I/O Board Failure	0 = Off 1 = On
551	AFD Power Intfc Controller Board Failure	0 = Off 1 = On

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Object Identifier	Object Name	Object Status
552	AFD Power Structure Board Failure	0 = Off 1 = On
553	AFD DPI Communication Failure	0 = Off 1 = On
554	AFD RS485 Board Memory Error Type 2	0 = Off 1 = On
555	External Chilled/Hot Water Setpoint	0 = Off 1 = On
556	External Current Limit Setpoint	0 = Off 1 = On
557	Evaporator Entering Water Temp Sensor	0 = Off 1 = On
558	Evaporator Leaving Water Temp Sensor	0 = Off 1 = On
559	Condenser Entering Water Temp Sensor	0 = Off 1 = On
560	Condenser Leaving Water Temp Sensor	0 = Off 1 = On
561	Evaporator Diff Water Pressure Xdcr	0 = Off 1 = On
562	Condenser Diff Water Pressure Xdcr(b)	0 = Off 1 = On
565	Evap Saturated Refrigerant Temp Sensor	0 = Off 1 = On
566	Cond Saturated Refrigerant Temp Sensor	0 = Off 1 = On
568	Condenser Refrigerant Pressure Xdcr(b)	0 = Off 1 = On
569	Oil Tank Temperature Sensor	0 = Off 1 = On
570	Oil Pump Discharge Pressure Transducer	0 = Off 1 = On
571	Oil Tank Pressure Transducer	0 = Off 1 = On
572	Motor Winding Temperature 1 Sensor	0 = Off 1 = On
573	Motor Winding Temperature 2 Sensor	0 = Off 1 = On

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Object Identifier	Object Name	Object Status
574	Motor Winding Temperature 3 Sensor	0 = Off 1 = On
575	Inboard Bearing Temp Sensor	0 = Off 1 = On
576	Outboard Bearing Temp Sensor	0 = Off 1 = On
577	Cprsr Discharge Refrigerant Temp Sensor	0 = Off 1 = On
578	Outdoor Air Temp Sensor	0 = Off 1 = On
579	Purge Cprsr Suction Rfgt Temp Sensor	0 = Off 1 = On
580	Purge Carbon Tank Temperature Sensor	0 = Off 1 = On
581	External Base Loading Setpoint	0 = Off 1 = On
583	Purge Liquid Level Too High Warning	0 = Off 1 = On
584	Purge Liquid Level Too High Continuously	0 = Off 1 = On
585	Purge Carbon Regen Temp Not Satisfied	0 = Off 1 = On
586	Purge Carbon Regen Temp Limit Exceeded	0 = Off 1 = On
587	Purge Daily Pumpout Limit Exceeded	0 = Off 1 = On
588	Purge Carbon Regen Temperature Too Low	0 = Off 1 = On
589	Low Evaporator Refrigerant Temperature	0 = Off 1 = On
590	High Oil Temperature	0 = Off 1 = On
591	Low Evap Leaving Water Temp: Unit Off	0 = Off 1 = On
592	Low Evap Leaving Water Temp: Unit On	0 = Off 1 = On
593	Evaporator Water Flow Overdue	0 = Off 1 = On

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Object Identifier	Object Name	Object Status
594	Evaporator Water Flow Lost	0 = Off 1 = On
595	High Evaporator Water Temperature	0 = Off 1 = On
596	Condenser High Pressure Cutout	0 = Off 1 = On
597	Emergency Stop	0 = Off 1 = On
598	MP: Invalid Configuration	0 = Off 1 = On
603	MP: Reset Has Occurred	0 = Off 1 = On
604	Extended Compressor Surge	0 = Off 1 = On
605	Over Voltage	0 = Off 1 = On
606	Under Voltage	0 = Off 1 = On
607	Low Evaporator Water Flow	0 = Off 1 = On
608	Condenser Water Flow Overdue	0 = Off 1 = On
609	Condenser Water Flow Lost	0 = Off 1 = On
614	Unexpected Starter Shutdown	0 = Off 1 = On
615	Starter Failed to Alarm/Start	0 = Off 1 = On
617	Low Differential Oil Pressure	0 = Off 1 = On
618	Check Oil Filter	0 = Off 1 = On
619	Oil Pressure Sensor Calibration	0 = Off 1 = On
620	High Vacuum Lockout	0 = Off 1 = On
621	Low Oil Temperature	0 = Off 1 = On

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Object Identifier	Object Name	Object Status
622	High Inboard Bearing Temperature	0 = Off 1 = On
623	High Outboard Bearing Temperature	0 = Off 1 = On
624	High Cprsr Rfgt Discharge Temperature	0 = Off 1 = On
625	High Motor Winding Temperature 1	0 = Off 1 = On
626	High Motor Winding Temperature 2	0 = Off 1 = On
627	High Motor Winding Temperature 3	0 = Off 1 = On
628	Refrigerant Monitor Input	0 = Off 1 = On
629	Unexpected Differential oil Pressure	0 = Off 1 = On
630	Differential Oil Pressure Overdue	0 = Off 1 = On
636	Generator Fault Relay Open	0 = Off 1 = On
637	Generator Ready Overdue	0 = Off 1 = On
646	Excessive Loss of Communication	0 = Off 1 = On
647	Comm Loss: External Auto/Stop	0 = Off 1 = On
648	Comm Loss: Emergency Stop	0 = Off 1 = On
649	Comm Loss: External Ice Building Command	0 = Off 1 = On
650	Comm Loss: Outdoor Air Temperature	0 = Off 1 = On
651	Comm Loss: Evap Leaving Water Temp	0 = Off 1 = On
652	Comm Loss: Evap Entering Water Temp	0 = Off 1 = On
653	Comm Loss: Condenser Leaving Water Temp	0 = Off 1 = On

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Object Identifier	Object Name	Object Status
654	Comm Loss: Condenser Entering Water Temp	0 = Off 1 = On
655	Comm Loss: Sec Cond Leaving Water Temp	0 = Off 1 = On
656	Comm Loss: Sec Cond Entering Water Temp	0 = Off 1 = On
657	Comm Loss: Oil Tank Temperature	0 = Off 1 = On
658	Comm Loss: Ext Chilled/Hot Wtr Setpoint	0 = Off 1 = On
659	Comm Loss: Ext Current Limit Setpoint	0 = Off 1 = On
660	Comm Loss: Cond High Pressure Cutout	0 = Off 1 = On
661	Comm Loss: Evaporator Water Flow Switch	0 = Off 1 = On
662	Comm Loss: Condenser Water Flow Switch	0 = Off 1 = On
663	Comm Loss: Evap Saturated Rfgt Temp	0 = Off 1 = On
664	Comm Loss: Cond Saturated Rfgt Temp	0 = Off 1 = On
666	Comm Loss: Cond Refrigerant Pressure	0 = Off 1 = On
667	Comm Loss: Oil Tank Pressure	0 = Off 1 = On
668	Comm Loss: Oil Pump Discharge Pressure	0 = Off 1 = On
669	Comm Loss: Evaporator Water Pump Relay	0 = Off 1 = On
670	Comm Loss: Condenser Water Pump Relay	0 = Off 1 = On
671	Comm Loss: Ice Building Relay	0 = Off 1 = On
672	Comm Loss: Starter	0 = Off 1 = On
673	Comm Loss: Adaptive Frequency Drive	0 = Off 1 = On

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Object Identifier	Object Name	Object Status
682	Comm Loss: Evap Diff Water Pressure	0 = Off 1 = On
683	Comm Loss: Cond Diff Water Pressure	0 = Off 1 = On
684	Comm Loss: Cond Rfgt Pressure Output	0 = Off 1 = On
685	Comm Loss: Compressor Motor % RLA Output	0 = Off 1 = On
686	Comm Loss: Refrigerant Monitor Input	0 = Off 1 = On
692	Comm Loss: Purge Cprsr Suction Rfgt Temp	0 = Off 1 = On
693	Comm Loss: Purge Carbon Tank Temperature	0 = Off 1 = On
694	Comm Loss: Purge Liquid Level Switch	0 = Off 1 = On
696	Comm Loss: Purge Pumpout Relay	0 = Off 1 = On
697	Comm Loss: Purge Carbon Tank Heater Rly	0 = Off 1 = On
698	Comm Loss: Purge Regen Solenoid Relay	0 = Off 1 = On
699	Comm Loss: Purge Alarm Relay	0 = Off 1 = On
700	Comm Loss: Purge Pumpout Solenoid Output	0 = Off 1 = On
701	Comm Loss: Purge Exhaust Solenoid Output	0 = Off 1 = On
702	Comm Loss: Purge Condensing Unit Relay	0 = Off 1 = On
705	Comm Loss: Oil/Refrigerant Pump Relay	0 = Off 1 = On
706	Comm Loss: Oil Tank Heater Relay	0 = Off 1 = On
709	Comm Loss: Motor Winding Temperature 1	0 = Off 1 = On
710	Comm Loss: Motor Winding Temperature 2	0 = Off 1 = On

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Object Identifier	Object Name	Object Status
711	Comm Loss: Motor Winding Temperature 3	0 = Off 1 = On
712	Comm Loss: Inboard Bearing Temperature	0 = Off 1 = On
713	Comm Loss: Outboard Bearing Temperature	0 = Off 1 = On
714	Comm Loss: Cprsr Discharge Rfgt Temp	0 = Off 1 = On
715	Comm Loss: IGV First Stage Actuator	0 = Off 1 = On
716	Comm Loss: IGV Second Stage Actuator	0 = Off 1 = On
717	Comm Loss: Ext Base Loading Setpoint	0 = Off 1 = On
718	Comm Loss: Ext Base Loading Command	0 = Off 1 = On
719	Comm Loss: External Hot Water Command	0 = Off 1 = On
723	Comm Loss: Generator Start/Stop Relay	0 = Off 1 = On
724	Comm Loss: Generator Speed Signal Output	0 = Off 1 = On
725	Comm Loss: Generator Up To Speed Input	0 = Off 1 = On
726	Comm Loss: Generator Fault Input	0 = Off 1 = On
727	Comm Loss: Generator Fault Lockout	0 = Off 1 = On
739	Comm Loss: AFD Speed Signal VDC Output	0 = Off 1 = On
744	Comm Loss: Programmable Relay Board 1	0 = Off 1 = On
745	Comm Loss: Programmable Relay Board 2	0 = Off 1 = On
755	Starter Did Not Transition	0 = Off 1 = On
756	Starter Did Not Fully Accelerate	0 = Off 1 = On

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757	Phase Reversal	0 = Off 1 = On
759	Starter Dry Run Test	0 = Off 1 = On
761	Phase Loss	0 = Off 1 = On
763	Power Loss	0 = Off 1 = On
765	Momentary Power Loss	0 = Off 1 = On
767	Severe Current Unbalance	0 = Off 1 = On
769	Starter Fault Type 1	0 = Off 1 = On
770	Starter Fault Type 2	0 = Off 1 = On
771	Starter Fault Type 3	0 = Off 1 = On
772	Transition Complete Input Shorted	0 = Off 1 = On
773	At Speed Input Shorted	0 = Off 1 = On
774	Transition Complete Input Opened	0 = Off 1 = On
775	At Speed Input Opened	0 = Off 1 = On
776	Motor Current Overload	0 = Off 1 = On
778	Compressor Did Not Accelerate: Shutdown	0 = Off 1 = On
779	Cprsr Did Not Accelerate: Transition	0 = Off 1 = On
780	Starter Contactor Interrupt Failure	0 = Off 1 = On
782	Starter Module Memory Error Type 1	0 = Off 1 = On
783	Starter Module Memory Error Type 2	0 = Off 1 = On

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Object Identifier	Object Name	Object Status
784	Starter Comm Loss: Main Processor	0 = Off 1 = On
795	AFD Power Loss	0 = Off 1 = On
796	AFD Start Inhibited	0 = Off 1 = On
797	AFD Motor Current Overload	0 = Off 1 = On
798	AFD Motor Short	0 = Off 1 = On
799	AFD Instantaneous Current Overload	0 = Off 1 = On
800	AFD High Temperature	0 = Off 1 = On
801	AFD Output Phase Loss	0 = Off 1 = On
802	AFD Ground Fault	0 = Off 1 = On
803	HPC/High AFD Heat Sink Water Pressure	0 = Off 1 = On
804	AFD Comm Loss: Main Processor	0 = Off 1 = On
805	AFD High Bus Voltage	0 = Off 1 = On
806	AFD Control Board Memory Error Type 2	0 = Off 1 = On
807	AFD General Failure	0 = Off 1 = On
808	AFD Fatal Software Error	0 = Off 1 = On
809	AFD I/O Board Failure	0 = Off 1 = On
810	AFD Power Intfc Controller Board Failure	0 = Off 1 = On
811	AFD Power Structure Board Failure	0 = Off 1 = On
812	AFD DPI Communication Failure	0 = Off 1 = On

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Object Identifier	Object Name	Object Status
813	AFD RS485 Board Memory Error Type 2	0 = Off 1 = On
814	Evap Saturated Refrigerant Temp Sensor	0 = Off 1 = On
815	Cond Saturated Refrigerant Temp Sensor	0 = Off 1 = On
816	Condenser Refrigerant Pressure Xdcr(b)	0 = Off 1 = On
817	Oil Tank Temperature Sensor	0 = Off 1 = On
818	Oil Pump Discharge Pressure Transducer	0 = Off 1 = On
819	Oil Tank Pressure Transducer	0 = Off 1 = On
820	Motor Winding Temperature 1 Sensor	0 = Off 1 = On
821	Motor Winding Temperature 2 Sensor	0 = Off 1 = On
822	Motor Winding Temperature 3 Sensor	0 = Off 1 = On
823	Inboard Bearing Temp Sensor	0 = Off 1 = On
824	Outboard Bearing Temp Sensor	0 = Off 1 = On
825	Cprsr Discharge Refrigerant Temp Sensor	0 = Off 1 = On
826	Purge Cprsr Suction Rfgr Temp Sensor	0 = Off 1 = On
827	Purge Carbon Tank Temperature Sensor	0 = Off 1 = On
828	Purge Liquid Level Too High Warning	0 = Off 1 = On
829	Purge Liquid Level Too High Continuously	0 = Off 1 = On
830	Purge Carbon Regen Temp Not Satisfied	0 = Off 1 = On
831	Purge Carbon Regen Temp Limit Exceeded	0 = Off 1 = On

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Object Identifier	Object Name	Object Status
832	Purge Daily Pumpout Limit Exceeded	0 = Off 1 = On
833	Purge Carbon Regen Temperature Too Low	0 = Off 1 = On
834	Low Evaporator Refrigerant Temperature	0 = Off 1 = On
835	High Oil Temperature	0 = Off 1 = On
836	Condenser High Pressure Cutout	0 = Off 1 = On
837	Extended Compressor Surge	0 = Off 1 = On
838	Over Voltage	0 = Off 1 = On
839	Under Voltage	0 = Off 1 = On
840	Unexpected Starter Shutdown	0 = Off 1 = On
841	Starter Failed to Arm/Start	0 = Off 1 = On
843	Low Differential Oil Pressure	0 = Off 1 = On
844	Check Oil Filter	0 = Off 1 = On
845	Oil Pressure Sensor Calibration	0 = Off 1 = On
846	High Vacuum Lockout	0 = Off 1 = On
847	Low Oil Temperature	0 = Off 1 = On
848	High Inboard Bearing Temperature	0 = Off 1 = On
849	High Outboard Bearing Temp	0 = Off 1 = On
850	High Cprsr Rfgt Discharge Temperature	0 = Off 1 = On
851	High Motor Winding Temperature 1	0 = Off 1 = On

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Object Identifier	Object Name	Object Status
852	High Motor Winding Temperature 2	0 = Off 1 = On
853	High Motor Winding Temperature 3	0 = Off 1 = On
854	Unexpected Differential Oil Pressure	0 = Off 1 = On
855	Differential Oil Pressure Overdue	0 = Off 1 = On
858	Generator Fault Relay Open	0 = Off 1 = On
859	Generator Ready Signal Overdue	0 = Off 1 = On
860	Comm Loss: Oil Tank Temperature	0 = Off 1 = On
861	Comm Loss: Cond High Pressure Cutout	0 = Off 1 = On
862	Comm Loss: Evap Sat Refrig Temp	0 = Off 1 = On
863	Comm Loss: Cond Saturated Rfgt Temp	0 = Off 1 = On
864	Comm Loss: Cond Refrigerant Pressure	0 = Off 1 = On
865	Comm Loss: Oil Tank Pressure	0 = Off 1 = On
866	Comm Loss: Oil Pump Discharge Pressure	0 = Off 1 = On
867	Comm Loss: Starter	0 = Off 1 = On
869	Comm Loss: Adaptive Frequency Drive	0 = Off 1 = On
872	Comm Loss: Cond Rfgt Pressure Output	0 = Off 1 = On
873	Comm Loss: Compressor Motor % RLA Output	0 = Off 1 = On
874	Comm Loss: Purge Cprsr Suction Rfgt Temp	0 = Off 1 = On
875	Comm Loss: Purge Carbon Tank Temperature	0 = Off 1 = On

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Object Identifier	Object Name	Object Status
876	Comm Loss: Purge Liquid Level Switch	0 = Off 1 = On
878	Comm Loss: Purge Pumpout Relay	0 = Off 1 = On
879	Comm Loss: Purge Carbon Tank Heater Rly	0 = Off 1 = On
880	Comm Loss: Purge Regen Solenoid Relay	0 = Off 1 = On
881	Comm Loss: Purge Alarm Relay	0 = Off 1 = On
882	Comm Loss: Purge Pumpout Solenoid Output	0 = Off 1 = On
883	Comm Loss: Purge Exhaust Solenoid Output	0 = Off 1 = On
884	Comm Loss: Purge Condensing Unit Relay	0 = Off 1 = On
887	Comm Loss: Oil/Refrigerant Pump Relay	0 = Off 1 = On
888	Comm Loss: Oil Tank Heater Relay	0 = Off 1 = On
889	Comm Loss: Motor Winding Temperature 1	0 = Off 1 = On
890	Comm Loss: Motor Winding Temperature 2	0 = Off 1 = On
891	Comm Loss: Motor Winding Temperature 3	0 = Off 1 = On
892	Comm Loss: Inboard Bearing Temperature	0 = Off 1 = On
893	Comm Loss: Outboard Bearing Temperature	0 = Off 1 = On
894	Comm Loss: Cprsr Discharge Rfght Temp	0 = Off 1 = On
895	Comm Loss: IGV First Stage Actuator	0 = Off 1 = On
896	Comm Loss: IGV Second Stage Actuator	0 = Off 1 = On
897	Comm Loss: Generator Start/Stop Relay	0 = Off 1 = On

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Object Identifier	Object Name	Object Status
898	Comm Loss: Generator Speed Signal Output	0 = Off 1 = On
899	Comm Loss: Generator Up To Speed Input	0 = Off 1 = On
900	Comm Loss: Generator Fault Input	0 = Off 1 = On
901	Comm Loss: External Ckt Lockout	0 = Off 1 = On
903	Purge Regen Cooldown Temp Too High	0 = Off 1 = On
904	Purge Regen Cooldown Temp Too High Ckt2	0 = Off 1 = On
905	Restart Inhibit	0 = Off 1 = On
906	Restart Inhibit Ckt2	0 = Off 1 = On
909	AFD Contactor Interrupt Failure	0 = Off 1 = On
910	AFD Contactor Interrupt Failure Ckt2	0 = Off 1 = On
911	High Evaporator Refrigerant Temperature	0 = Off 1 = On
912	High Evaporator Refrigerant Temperature Ckt2	0 = Off 1 = On
914	Software Error 1001	0 = Off 1 = On
915	Software Error 1004	0 = Off 1 = On
917	Comm Loss: AFD Speed Signal VDC Output	0 = Off 1 = On
918	Comm Loss: Oil Cooler Solenoid	0 = Off 1 = On
919	Comm Loss: Oil Cooler Solenoid	0 = Off 1 = On
920	Comm Loss: Oil Tank Heater 4E1 Rela	0 = Off 1 = On
921	Comm Loss: Oil Tank Heater 4E1 Relay	0 = Off 1 = On

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Object Identifier	Object Name	Object Status
922	Comm Loss: Oil Tank Heater 4E2 Relay	0 = Off 1 = On
923	Comm Loss: Oil Tank Heater 4E2 Relay	0 = Off 1 = On
924	Comm Loss: Oil Vent Line	0 = Off 1 = On
925	Comm Loss: Oil Vent Line	0 = Off 1 = On
926	Comm Loss: Outboard Bearing Pad Temp 1	0 = Off 1 = On
927	Comm Loss: Outboard Bearing Pad Temp 1	0 = Off 1 = On
928	Comm Loss: Outboard Bearing Pad Temp 2	0 = Off 1 = On
929	Comm Loss: Outboard Bearing Pad Temp 2	0 = Off 1 = On
930	Comm Loss: Outboard Bearing Pad Temp 3	0 = Off 1 = On
931	Comm Loss: Outboard Bearing Pad Temp 3	0 = Off 1 = On
932	High Outboard Bearing Pad Temperature 1	0 = Off 1 = On
933	High Outboard Bearing Pad Temperature 1	0 = Off 1 = On
934	High Outboard Bearing Pad Temperature 2	0 = Off 1 = On
935	High Outboard Bearing Pad Temperature 2	0 = Off 1 = On
936	High Outboard Bearing Pad Temperature 3	0 = Off 1 = On
937	High Outboard Bearing Pad Temperature 3	0 = Off 1 = On
938	Outboard Bearing Pad Temp 1 Sensor	0 = Off 1 = On
939	Outboard Bearing Pad Temp 1 Sensor	0 = Off 1 = On
940	Outboard Bearing Pad Temp 2Sensor	0 = Off 1 = On

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Object Identifier	Object Name	Object Status
941	Outboard Bearing Pad Temp 2Sensor	0 = Off 1 = On
942	Outboard Bearing Pad Temp 3Sensor	0 = Off 1 = On
943	Outboard Bearing Pad Temp 3 Sensor	0 = Off 1 = On
944	Inverted Evaporator Water Temperature	0 = Off 1 = On
945	Inverted Condenser Water Temperature	0 = Off 1 = On
946	Inverted Evaporator Approach Temperature Ckt1	0 = Off 1 = On
947	Inverted Condenser Approach Temperature Ckt1	0 = Off 1 = On
948	Inverted Evaporator Approach Temperature Ckt2	0 = Off 1 = On
949	Inverted Condenser Approach Temperature Ckt2	0 = Off 1 = On

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Object Identifier	Object Name	Description	Property Values	Relinquish Default	Valid Range
1	BAS Base Loading Enable		0= Disable 1= Enable	Not applicable	0 or 1
2	BAS Diagnostic Reset		0= False (Reset, No) 1= True (Reset, Yes)	Not applicable	0 or 1

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Object Identifier	Object Name	Description	Object States	Configuration Dependence
1	Chiller Running Status		1 = Not Running 2 = Starting 3 = Running 4 = Stopping	
2	Chiller Control Mode		1 = Cool 2 = Heat 3 = Ice 4 = Free Cooling	
3	Setpoint Source		1 = BAS/Ext/FP 2 = Ext/FP 3 = Front Panel	
4	Active Chilled Water Setpoint Source		1 = Front Panel 2 = External 3 = Ice Machine 4 = BAS	
5	Active Current Limit Setpoint Source		1 = Front Panel 2 = External 3 = Ice Machine 4 = BAS	
6	Active Hot Water Setpoint Source		1 = Front Panel 2 = External 3 = Ice Machine 4 = BAS	
7	Active Base Loading Setpoint Source		1 = Front Panel 2 = External 3 = Ice Machine 4 = BAS	
8	Front Panel Auto/Stop		1 = Stop 2 = Auto	
9	Front Panel Chiller Control Mode		1 = Cool 2 = Heat 3 = Ice 4 = Free Cooling	
10	External Auto Stop		1 = Off 2 = Auto	
11	Compressor Running Ckt1		1 = Stopped 2 = Running 3 = Arm	

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Object Identifier	Object Name	Description	Object States	Configuration Dependence
12	Compressor Running Ckt2		1= Stopped 2 = Running 3 = Arm	
13	Refrigerant Type		0=R11 1=R12 2=R22 3=R123 4=R134a 5=R407C 6=R410A 7=R113 8=R114 9=R500 10=R502 11=R404A 12=R513A 13=R1233zd(E) 14=R514A 15=R1234ze-(E)	

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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 4= Free Cool	1= Cool	1 to 4
3	Circuit Lockout Ckt1		0= Auto 1= Lock	1= Lock	0 or 1
4	Circuit Lockout Ckt2		0= Auto 1= Lock	1= Lock	0 or 1



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 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.

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Register Type	Register Value	Byte Order	Invalid Values
Binary	u16	0 = False/Off/No/Disabled/Stop 1 = True/On/Yes/Enabled/Auto	
Concentration	u16	ppm	
Current	U16	Amps	
Enumeration	u16	Not applicable	
Flow, Air	u16	Liters/Second (100 = 212 cfm)	
Flow, Water	u16	Liters/Minute (1,000 = 264 gpm)	
Frequency	u16	0.1 Hz (600 = 60 Hz)	
Percent	s16	0.005% (20,000 = 100%)	
Power	u16	kW (3517 = 1,000 tons)	
Power Factor	s16	0.005 (200 = 1)	
Pressure	u16	0.1 kPa absolute (1,000 = 14.5 psi)	
Differential Pressure	s16	0.1 kPa absolute (1,000 = 14.5 psi)	
Temperature	s16	0.01 °C (100 = 1 °C);	
Time Interval	u32	Seconds	
Voltage	u16	Volts	
None	u16	Not applicable	

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Register Address	Point Name	Description	Register Type	Register Value	Valid Range
40001	BAS Chiller Auto Stop Command		Binary		0,1
40002	BAS Chiller Mode Command		Enumeration	0= Cool 1= Heat 2= Ice 3= Free Cool	0 to 3
40003	BAS Chilled Water Setpoint		Temperature		0°F to 75°F (depending on installed options) (-17.78°C to 23.9°C)
40004	BAS Current Limit Setpoint		Percent		0–100
40005	BAS Hot Water Setpoint		Temperature		80°F to 140°F (26.7°C to 60°C)
40006	BAS Base Loading Setpoint		Percent		0–100
40007	BAS Base Loading Enable		Binary		0,1
40008	BAS Diagnostic Reset		Binary		0,1
40009	Evaporator Pump Override		Binary		0,1
40010	Condenser Pump Override		Binary		0,1
40011	Circuit Lockout Ckt1		Binary	0= Auto 1= Locked	0,1
40012	Circuit Lockout Ckt2		Binary	0= Auto 1= Locked	0,1

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Register Address	Object Name	Description	Register Type	Register Value	Valid Range
30001	Software Type		Not applicable	458 = CTVD	
30002	Software Revision		Not applicable		
30003	Chiller Running		Binary		
30004	Unit Average Line Current		Percent		
30005	Active Current Limit Setpoint		Percent		
30006	Active Base Loading Setpt		Percent		
30007	Unit Power Consumption		Power		
30008	Calculated Chiller Capacity		Power		
30009	Approx Unit Heating Power		Power		
30010	Active Cool/Heat Setpoint Temperature		Temperature		
30011	Evap Leaving Water Temp		Temperature		
30012	Evap Entering Water Temp		Temperature		
30013	Cond Entering Water Temp		Temperature		
30014	Cond Leaving Water Temp		Temperature		
30015	Evaporator Pump Control		Binary		
30016	Evaporator Water Flow		Binary		
30017	Approx Evap Water Flow		Flow, Water		
30018	Evap Differential Wtr Press		Pressure		
30019	Condenser Pump Control		Binary		
30020	Condenser Water Flow		Binary		
30021	Approx Cond Water Flow		Flow, Water		
30022	Cond Differential Wtr Press		Pressure		
30023	Second Condenser Entering Water Temperature		Temperature		
30024	Second Condenser Leaving Water Temperature		Temperature		
30025	Last Diagnostic Code		Enumeration	Refer to the diagnostic sub-section under the section, "Duplex CenTraVac Object Data Points and Configurations," p. 39.	

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Register Address	Object Name	Description	Register Type	Register Value	Valid Range
30026	Chiller Running Status		Enumeration	0 = Off/Idle (Auto) 1 = Starting 2 = Running 3 = Stopping	
30027	Chiller Control Mode		Enumeration	0 = Cool 1 = Heat 2 = Ice 3 = Free Cool	
30028	Setpoint Source		Enumeration	0 = BAS+External+Local 1 = External+Local 2 = Local	
30029	Active Chilled Water Setpoint Source		Enumeration	0 = Front Panel 1 = External 2 = Ice Machine 3 = BAS	
30030	Active Current Limit Setpoint Source		Enumeration	0 = Front Panel 1 = External 2 = Ice Machiine 3 = BAS	
30031	Active Base Loading Setpoint Source		Enumeration	0 =Front Panel 1 = External 2 = Ice Machiine 3 = BAS	
30032	Active Hot Water Setpoint Source		Enumeration	0 = Front Panel 1 = External 2 =Ice Machiine 3 = BAS	
30033	Front Panel Auto/Stop		Binary		
30034	Front Panel Chiller Control Mode		Enumeration	0 = Cool 1 = Heat 2 = Ice 3 = Free Cool	
30035	Front Panel Chilled Water Setpt		Temperature		
30036	Front Panel Current Limit Setpoint		Percent		

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Register Address	Object Name	Description	Register Type	Register Value	Valid Range
30037	Front Panel Hot Water Setpt		Temperature		
30038	Front Panel Base Loading Setpt		Percent		
30039	Front Panel Base Loading Command		Binary		
30040	External Auto Stop		Binary		
30041	Ext Chilled Wtr Setpt		Temperature		
30042	Ext Current Limit Setpt		Percent		
30043	External Base Loading Setpoint		Percent		
30044	Emergency Stop		Binary		
30045	Manual Override Exists		Binary		
30046	Base Loading		Binary		
30047	Alarm Present		Binary		
30048	Run Enabled		Binary		
30049	Local Setpoint Control		Binary		
30050	Maximum Capacity Relay		Binary		
30051	Limit Mode Relay Status		Binary		
30052	Head Relief Request Relay		Binary		
30054	Refrigerant Monitor		Concentration		
30055	Compressor Running Ckt1		Binary		
30056	Evaporator Refrigerant Pressure Ckt1		Pressure		
30057	Condenser Refrigerant Pressure Ckt1		Pressure		
30058, 30187	Differential Refrigerant Pressure Ckt1		Pressure		
30059	Oil Tank Pressure Ckt1		Pressure		
30060	Oil Pump Discharge Pressure Ckt1		Pressure		
30061, 30189	Oil Differential Pressure Ckt1		Pressure	30061 uses units of Pressure. 30189 uses units of Differential Pressure.	
30062	Oil Tank Temperature Ckt1		Temperature		
30063	Evaporator Saturated Rfgt Temp Ckt1		Temperature		
30064	Condenser Saturated Rfgt Temp Ckt1		Temperature		

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Register Address	Object Name	Description	Register Type	Register Value	Valid Range
30065	Compressor Rfgt Discharge Temp Ckt1		Temperature		
30066	IGV 1 Percent Open Ckt1		Percent		
30067	IGV 2 Percent Open Ckt1		Percent		
30068	Purge Compressor Relay Ckt1		Binary		
30069	Pumpout Relay Ckt1		Binary		
30070	Purge Regen Valve Solenoid Ckt1		Binary		
30071	Purge Carbon Tank Temp Ckt1		Temperature		
30072	Purge Liquid Temperature Ckt1		Temperature		
30073	Purge Rfgt Compressor Suction Temp Ckt1		Temperature		
30074	Time Until Next Purge Run Ckt1		Time Interval		
30075			(continued)		
30076	Pumpout Chiller On-7 Days Ckt1		Time Interval		
30077			(continued)		
30078	Pumpout Chiller Off-7 Days Ckt1		Time Interval		
30079			(continued)		
30080	Daily Pumpout-24 Hours Ckt1		Time Interval		
30081			(continued)		
30082	Pumpout-Life Ckt1		Time Interval		
30083			(continued)		
30084	Refrigeration-Life Ckt1		Time Interval		
30085			(continued)		
30086	Compressor Starts Ckt1		Count		
30087			(continued)		
30088	Compressor Running Time Ckt1		Time Interval		
30089			(continued)		
30090	Starter Voltage Phase AB Ckt1		Voltage		
30091	Starter Voltage Phase BC Ckt1		Voltage		
30092	Starter Voltage Phase CA Ckt1		Voltage		
30093	Starter Average Phase Voltage Ckt1		Voltage		
30094	Starter Current L1 Ckt1		Current		
30095	Starter Current L2 Ckt1		Current		

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Register Address	Object Name	Description	Register Type	Register Value	Valid Range
30096	Starter Current L3 Ckt1		Current		
30097	Average Line Current Ckt1		Current		
30098	Starter Current L1 % RLA Ckt1		Percent		
30099	Starter Current L2 % RLA Ckt1		Percent		
30100	Starter Current L3 % RLA Ckt1		Percent		
30101	Average Line Current % RLA Ckt1		Percent		
30102	Starter Power Consumption Ckt1		Power		
30103	Starter Load Power Factor Ckt1		Power Factor		
30104	Inboard Bearing Temperature Ckt1		Temperature		
30105	Outboard Bearing Temperature Ckt1		Temperature		
30106	Motor Winding Temp 1 Ckt1		Temperature		
30107	Motor Winding Temp 2 Ckt1		Temperature		
30108	Motor Winding Temp 3 Ckt1		Temperature		
30109	Frequency Ckt1		Frequency		
30110	AFD Transistor Temperature Ckt1		Temperature		
30111	Compressor Running Ckt2		Binary		
30112	Evaporator Refrigerant Pressure Ckt2		Pressure		
30113	Condenser Refrigerant Pressure Ckt2		Pressure		
30114, 30188	Differential Refrigerant Pressure Ckt2		Pressure		
30115	Oil Tank Pressure Ckt2		Pressure		
30116	Oil Pump Discharge Pressure Ckt2		Pressure		
30117, 30190	Oil Differential Pressure Ckt2		Pressure	30117 uses units of Pressure. 30190 uses units of Differential Pressure.	
30118	Oil Tank Temperature Ckt2		Temperature		
30119	Evaporator Saturated Rfgt Temp Ckt2		Temperature		
30120	Condenser Saturated Rfgt Temp Ckt2		Temperature		

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Modbus™
 CTV-Duplex (UC800)

Date: 12/6/2024
 Reference Document: BAS-SVP083*-EN



Register Address	Object Name	Description	Register Type	Register Value	Valid Range
30121	Compressor Rfgt Discharge Temp Ckt2		Temperature		
30122	IGV 1 Percent Open Ckt2		Percent		
30123	IGV 2 Percent Open Ckt2		Percent		
30124	Purge Compressor Relay Ckt2		Binary		
30125	Pumpout Relay Ckt2		Binary		
30126	Purge Regen Valve Solenoid Ckt2		Binary		
30127	Purge Carbon Tank Temp Ckt2		Temperature		
30128	Purge Liquid Temperature Ckt2		Temperature		
30129	Purge Rfgt Compressor Suction Temp Ckt2		Temperature		
30130	Time Until Next Purge Run Ckt2		Time Interval		
30131			(continued)		
30132	Pumpout Chiller On 7 Days Ckt2		Time Interval		
30133			(continued)		
30134	Pumpout Chiller Off 7 Days Ckt2		Time Interval		
30135			(continued)		
30136	Daily Pumpout-24 Hours Ckt2		Time Interval		
30137			(continued)		
30138	Pumpout-Life Ckt2		Time Interval		
30139			(continued)		
30140	Refrigeration-Life Ckt2		Time Interval		
30141			(continued)		
30142	Compressor Starts Ckt2		Count		
30143			(continued)		
30144	Compressor Running Time Ckt2		Time Interval		
30145			(continued)		
30146	Starter Voltage Phase AB Ckt2		Voltage		
30147	Starter Voltage Phase BC Ckt2		Voltage		
30148	Starter Voltage Phase CA Ckt2		Voltage		
30149	Starter Average Phase Voltage Ckt2		Voltage		
30150	Starter Current L1 Ckt2		Current		
30151	Starter Current L2 Ckt2		Current		
30152	Starter Current L3 Ckt2		Current		

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Register Address	Object Name	Description	Register Type	Register Value	Valid Range
30153	Average Line Current Ckt2		Current		
30154	Starter Current L1 % RLA Ckt2		Percent		
30155	Starter Current L2 % RLA Ckt2		Percent		
30156	Starter Current L3 % RLA Ckt2		Percent		
30157	Average Line Current % RLA Ckts		Percent		
30158	Starter Power Consumption Ckt2		Power		
30159	Starter Load Power Factor Ckt2		Power Factor		
30160	Inboard Bearing Temperature Ckt2		Temperature		
30161	Outboard Bearing Temperature Ckt2		Temperature		
30162	Motor Winding Temperature 1 Ckt2		Temperature		
30163	Motor Winding Temperature 2 Ckt2		Temperature		
30164	Motor Winding Temperature 3 Ckt2		Temperature		
30165	Frequency Ckt2		Frequency		
30166	AFD Transistor Temperature Ckt2		Temperature		
30167	AFD Input Frequency Ckt1		Frequency		
30168	AFD Average Input Current Ckt1		Current		
30169	AFD Output Voltage Ckt1		Voltage		
30170	AFD Input Current L1 Ckt1		Current		
30171	AFD Input Current L2 Ckt1		Current		
30172	AFD Input Current L3 Ckt1		Current		
30174	AFD Inverter Base Temperature Ckt1		Temperature		
30175	AFD Rectifier Base Temperature Ckt1		Temperature		
30176	AFD Output Power Ckt1		Power		
30177	AFD Input Frequency Ckt2		Frequency		
30178	AFD Average Input Current Ckt2		Current		
30179	AFD Output Voltage Ckt2		Voltage		
30180	AFD Input Current L1 Ckt2		Current		
30181	AFD Input Current L2 Ckt2		Current		
30182	AFD Input Current L2 Ckt2		Current		
30184	AFD Inverter Base Temperature Ckt2		Temperature		
30185	AFD Rectifier Base Temperature Ckt2		Temperature		
30186	AFD Output Power Ckt2		Power		

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30187	Differential Refrigerant Pressure Ckt1		Differential Pressure		
30188	Differential Refrigerant Pressure Ckt2		Differential Pressure		
30189	Oil Differential Pressure Ckt1		Differential Pressure		
30190	Oil Differential Pressure Ckt2		Differential Pressure		
30191	AFD Motor Voltage U Ckt1		Voltage		
30192	AFD Motor Voltage VCkt1		Voltage		
30193	AFD Motor Voltage WCkt1		Voltage		
30194	AFD IGBT Temperature U Ckt1		Temperature		
30195	AFD IGBT Temperature V Ckt1		Temperature		
30196	AFD IGBT Temperature W Ckt1		Temperature		
30197	AFD Percent RLA Ripple Ckt1		Percent		
30198	DC Bus Voltage Ckt1		Voltage		
30199	AFD Motor Voltage U Ckt2		Voltage		
30200	AFD Motor Voltage V Ckt2		Voltage		
30201	AFD Motor Voltage W Ckt2		Voltage		
30202	AFD IGBT Temperature U Ckt2		Temperature		
30203	AFD IGBT Temperature V Ckt2		Temperature		
30204	AFD IGBT Temperature W Ckt2		Temperature		
30205	AFD Percent RLA Ripple Ckt2		Percent		
30206	DC Bus Voltage Ckt2		Voltage		
30207	Outboard Bearing Pad Temperature 1 Ckt1		Temperature		
30208	Outboard Bearing Pad Temperature 2 Ckt1		Temperature		
30209	Outboard Bearing Pad Temperature 3 Ckt1		Temperature		
30210	Outboard Bearing Pad Temperature 1 Ckt2		Temperature		
30211	Outboard Bearing Pad Temperature 2 Ckt2		Temperature		
30212	Outboard Bearing Pad Temperature 3 Ckt2		Temperature		

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Register Address	Object Name	Description	Register Type	Register Value	Valid Range
30213	Refrigerant Type		Enumeration	0=R11 1=R12 2=R22 3=R123 4=R134a 5=R407C 6=R410A 7=R113 8=R114 9=R500 10=R502 11=R404A 12=R513A 13=R1233zd(E) 14=R514A 15=R1234ze-(E)	
30215	Frequency Command Ckt1		Frequency		
30216	Frequency Command Ckt2		Frequency		
30217	Circuit Available Ckt1				
30218	Circuit Available Ckt2				