Document Name

# MODBUS POINTS LIST

Unit Type

## Standard SA Dehumidifiers Program Version 2.x.x

| * Coil Address | Description | Modbus Function | R/W Status | Comments |
|---|---|---|---|---|
| 00002 | Supply Fan | 1 | Read Only | Confirmation of Supply Fan, 0 = Off, 1 = On. |
| 00003 | Exhaust Fan | 1 | Read Only | Confirmation of Exhaust Fan, 0 = Off, 1 = On. |
| 00004 | Compressor A | 1 | Read Only | Confirmation of Compressor A, 0 = Off, 1 = On. |
| 00005 | Compressor B | 1 | Read Only | Confirmation of Compressor B, 0 = Off, 1 = On. |
| 00006 | Air Flow | 1 | Read Only | Confirmation of Air Flow. 0 = No Flow, 1 = Flow. |
| 00007 | Alarm Active | 1 | Read Only | Confirmation of Alarm Status. 0 = Alarm, 1 = Normal. |
| 00008 | Auxiliary Air Heat Required | 1 | Read Only | Confirmation of Aux. Heat, 0 = Not Required, 1 = Required. |
| 00009 | Auxiliary Pool 1 Heat Required | 1 | Read Only | Confirmation of Aux. Heat, 0 = Not Required, 1 = Required. |
| 00010 | Auxiliary Pool 2 Heat Required | 1 | Read Only | Confirmation of Aux. Heat, 0 = Not Required, 1 = Required. |
| 00011 | Pool1 Water Flow | 1 | Read Only | Confirmation of Pool Water Flow. 0 = No Flow, 1 = Flow. |
| 00012 | Pool2 Water Flow | 1 | Read Only | Confirmation of Pool Water Flow. 0 = No Flow, 1 = Flow. |
| 00013 | Tower 1 Water Flow | 1 | Read Only | Confirmation of Tower Water Flow. 0 = No Flow, 1 = Flow. |
| 00014 | Tower 2 Water Flow | 1 | Read Only | Confirmation of Tower Water Flow. 0 = No Flow, 1 = Flow. |
| 00015 | Occupied | 1 | Read Only | Occupied Status. 0 = Un-occupied, 1 = Occupied. |
| 00016 | Event Mode | 1 | Read Only | Event Mode Status. 0 = Normal, 1 = Event. |
| 00017 | Unit Off | 1 | Read Only | Confirmation of Unit Status. 0 = Unit On, 1 = Unit Off. |
| 00019 | Purge Mode | 1 | Read Only | Purge Mode Status. 0 = Normal, 1 = Purging. |
| 00010 | Network Occupancy Command | 1/5 | Read/ Write | Write 1 to Occupy, 0 to Un-Occupy. |
| 00020 | Network Event Command | 1/5 | Read/ Write | Write 1 for Event Mode, 0 for Normal Mode. |
| 00021 | Network Purge Command | 1/5 | Read/ Write | Write 1 for Purge mode, 0 for Normal Mode. |
| 00022 | Network Unit Off Command | 1/5 | Read/ Write | Write 1 to set Unit to Off, 0 to set Unit to On. |
| 00023 | Remote Reset | 1/5 | Read/ Write | Write 1 to Reset. 0 is set after a program scan. |
| 00024 | Network Max OA Command | 1/5 | Read/ Write | Write 1 to Force Max OA condition. |
| 00025 | Roof / Wall Switch | 1/5 | Read/ Write | Set 1 when roof or wall is open. Set to 0 when closed. |

| * Holding Register Address | Description | Modbus Function | R/W Status | Comments |
|---|---|---|---|---|
| 00002 | Suction Pressure | 3 | Read Only | Linear from 0.0 to 250.0 psig, 0.0 to 17.2 BAR or 0 to 1720 kPa. |
| 00003 | Discharge Pressure | 3 | Read Only | Linear from 0.0 to 650.0 psig, 0.0 to 44.8 BAR or 0 to 4480 kPa. |
| 00004 | Zone Air Relative Humidity | 3 | Read Only | Linear from 0.0 to 100.0 %. |
| 00005 | Zone Air Temperature | 3 | Read Only | Linear from -42.0 to 137.0 °F or -41.1 to 58.3 °C. |
| 00006 | Supply Air Temperature | 3 | Read Only | Linear from -58.0 to 212.0 °F or -50.0 to 100.0 °C. |

| * Holding Register Address | Description | Modbus Function | R/W Status | Comments ** |
|---|---|---|---|---|
| 00007 | Suction Pressure Circuit B | 3 | Read Only | Linear from 0.0 to 250.0 psig, 0.0 to 17.2 BAR or 0 to 1720 kPa. |
| 00008 | Discharge Pressure Circuit B | 3 | Read Only | Linear from 0.0 to 650.0 psig, 0.0 to 44.8 BAR or 0 to 4480 kPa. |
| 00009 | Pool 1 Water Temperature | 3 | Read Only | Linear from -42.0 to 137.0 °F or -41.1 to 58.3 °C. |
| 00010 | Pool 2 Water Temperature | 3 | Read Only | Linear from -42.0 to 137.0 °F or -41.1 to 58.3 °C. |
| 00011 | Evap. Bypass Damper Command | 3 | Read Only | Linear from 0.0 to 100.0 %. |
| 00012 | Outside Air Damper Command | 3 | Read Only | Linear from 0.0 to 100.0 %. |
| 00013 | Auxiliary Air Heat Command | 3 | Read Only | Linear from 0.0 to 100.0 %. |
| 00014 | Exhaust Blower Command | 3 | Read Only | Linear from 0.0 to 100.0 %. |
| 00015 | Low Exhaust Blower Command | 3 | Read Only | Linear from 0.0 to 100.0 %. |
| 00016 | Zone Air RH Setpoint | 3/6 | Read/ Write | Settable from 0.0 to 100.0 %. |
| 00017 | Zone Air Temperature Setpoint | 3/6 | Read/ Write | Settable from 65.0 to 99.9 °F or 18.3 to 37.7 °C. |
| 00018 | Pool 1 Temperature Setpoint | 3/6 | Read/ Write | Settable from 70.0 to 104.0 °F or 21.1 to 40.0 °C. |
| 00019 | Pool 2 Temperature Setpoint | 3/6 | Read/ Write | Settable from 70.0 to 104.0 °F or 21.1 to 40.0 °C. |
| 00020 | Outdoor Air Relative Humidity | 3 | Read Only | Linear from 0.0 to 100.0 %. |
| 00021 | Outdoor Air Temperature | 3 | Read Only | Linear from -42.0 to 137.0 °F or -41.1 to 58.3 °C. |

| * Holding Register Address | Description | Modbus Function | R/W Status | Comments ** |
|---|---|---|---|---|
| 00129 | Unit Status | 3 | Read Only | 0=Satisfied/Off, 1=Heating, 2=Cooling, 3=Dehumidifying, 4=Dehum/Heat, 5=Dehum/Cool. |
| 00130 | Alarm Code | 3 | Read Only | Alarm code. See table at end of list. |
| 00131 | Supply Air Pressure Drop | 3 | Read Only | Linear from 0 to 2000 “wc, in thousandths, or 0-498 Pascal. |
| 00132 | Evaporator Air Press. Drop | 3 | Read Only | Linear from 0 to 2000 “wc, in thousandths, or 0-498 Pascal. |
| 00133 | Outdoor Air Pressure Drop | 3 | Read Only | Linear from 0 to 2000 “wc, in thousandths, or 0-498 Pascal. |
| 00134 | Zone Air Pressure Drop | 3 | Read Only | Linear from 0 to 2000 “wc, in thousandths, or 0-498 Pascal. |
| 00135 | VOC Sensor | 3 | Read Only | Linear from 0 to 2000 ppm of volatile organic compounds. |

* All coil and holding register addresses are in PLC style base 1 notation. If base 0 notation is required, subtract 1 from the address number.

** Refrigerant pressures can be set for psig, bar or kilopascal. When set for psig or bar, one decimal place is provided. For example, a reading of 2345 would be 234.5 psig. When set for kilopascal, a reading of 345 would be 345 kPa. Temperatures can be set for °F or °C with one decimal place provided as well. For example, when set for °F, a reading of 726 would be 72.6 °F. Air pressure can be set for In. Water Column or Pascal. The reading is in thousandths only when In. Water Column is used. For example, a reading of 1234 would be 1.234 “wc. When set for Pascal, a reading of 123 would be 123 Pa.

| CODE | ALARM DESCRIPTION |
|---|---|
| 1 | Low Suction Pressure A |
| 2 | Low Suction Pressure B |
| 3 | High Discharge Pressure A |
| 4 | High Discharge Pressure B |
| 5 | Supply Air Sensor Failure |
| 6 | Zone Air Sensor Failure |
| 7 | Supply Fan Overload |
| 8 | Compressor Circuit A Overload |
| 9 | Compressor Circuit B Overload |
| 10 | System Shutdown |
| 11 | Low Supply Air Temperature |
| 12 | Exhaust Fan Overload |
| 13 | Low Voltage Alarm |
| 14 | Low Air Flow Alarm |
| 15 | Freeze 'Stat Alarm |
| 16 | Low Exhaust Fan Overload |

| Revision (Rev.) History | | | | |
|---|---|---|---|---|
| **Rev.** | **Description** | **Date** | **Initials** | **ECN #** |
| 00 | Initial Release | 10/31/2014 | MTW | 2401 |
| 01 | Added Coil 00025, Roof or Wall Switch. | 12/19/2016 | MTW | 10200 |