



Partner: Can'nX  
 Model: Poolcop  
 Device Type: Pool Monitoring/Controller

### CONTACT SUPPORT:

|                  |   |
|------------------|---|
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| NOTES:           |   |

### GENERAL INFORMATION

|                             |   |
|-----------------------------|---|
| SIMPLWINDOWS NAME:          | Poolnx_Poolcop v1.0.umc   |
| CATEGORY:                   | Pool Monitoring/Controller  |
| VERSION:                    | v1.0  |
| SUMMARY:                    | Provides Creston-usable values about the data of a Poolcop pool.<br>This module performs a <b>TCP/IP connection</b> to a Pool'nX that is used like a proxy to gather data from Poolcop, send it to Crestron, and receive commands from Crestron to control the Poolcop. |
| GENERAL NOTES:              |   |
| CRESTRON HARDWARE REQUIRED: | 3-Series Processor, 4-Series Processor  |
| SETUP OF CRESTRON HARDWARE: | The Crestron Control Processor's IP address must be in the same subnet as the Pool'nX   |
| VENDOR FIRMWARE:            | N/A   |



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| <b>VENDOR SETUP:</b>  | The Pool'nX has to have an internet connection. |
| <b>CABLE DIAGRAM:</b> | N/A   |

### CONTROL: (BASIC FUNCTIONS):

| <u>Signal/Function Name</u> | <u>D,S,A</u> | <u>Digital, Serial, Analog signal property definition.</u>  |
|-----------------------------|--------------|---|
|                             |              | Each of the following signals will send a command to the Pool'nX/TCP server   |
| <b>di_Start_Client</b>      | D            | Opens a TCP/IP socket with a third-party Ethernet device for as long as the input is high.<br>High/1 (level sensitive) = Open socket; Low/0 = Close socket                            |
| <b>di_Reconnect_Enable</b>  | D            | When a connection is lost, the module will try to reconnect as long as the input is high<br>High/1 = Enable reconnection; Low/0 = disable reconnection                                |
| <b>di_Request_Update</b>    | D            | Ask the Pool'nX to send the pool data. Note that the Pool'nX send data automatically every 10 minutes.<br>High/1 (rising edge) = Order the Pool'nX to refresh data; Low/0 = No effect |
| ai_PumpSpeed                | A            | Changes the pump speed. Max speed depends on the installation.  |
| di_PumpOnOff                | D            | Switch pump On/Off<br>High/1 (rising edge) = Activate command; Low/0 = No effect<br>Status inversion<br>On -> [1] Off<br>Off -> [1] On  |
| di_ValvePosition_Filter     | D            | Change the valve position to Filter   |
| di_ValvePosition_Waste      | D            | Change the valve position to Waste  |
| di_ValvePosition_Closed     | D            | Change the valve position to Closed   |
| di_ValvePosition_Backwash   | D            | Change the valve position to Backwash   |
| di_ValvePosition_ByPass     | D            | Change the valve position to ByPass   |



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| di_ValvePosition_Rinse    | D | Change the valve position to Rinse                |
| di_ValvePosition_Rotation | A | Change the valve position to Rotation in progress |
|                           |   |   |
|                           |   |   |

**CONTROL: (ADDITIONAL FUNCTIONS):**

|                         |   |   |
|-------------------------|---|---|
| ai_ValvePosition        | D | Switch auxiliary On/Off [1-6] (if not controlled by regulation)<br><br>High/1 (rising edge) = Activate command; Low/0 = No effect<br>Status inversion<br>On -> [1] Off<br>Off -> [1] On       |
| di_Auxiliary_OnOff[1-6] | D | Change the valve position to the desired state depending on value given :<br><br>0 = Filter<br>1 = Waste<br>2 = Closed<br>3 = Backwash<br>4 = Bypass<br>5 = Rinse<br>9 = Rotation in progress |

**FEEDBACK: (BASIC FUNCTIONS):**

|                             |    |   |
|-----------------------------|----|---|
| //                          | // | Some ANALOG signal's value has been multiplied by 10 (To keep a precision of 0,1). These are signals that concern quantities, or values with units of measurement.<br>Remember to take this into account when manipulating ANALOG.  |
| Pump_Speed_Text             | S  | Serial value of the pump speed.   |
| Pump_Is_ON                  | S  | Inform about the pump's status.<br>High/1 = ON, Low/0 = OFF   |
| Valve_Position_English_Text | S  | Serial signification about the valve position.<br><br>To see all the possible codes and their signification, visit this documentation: <a href="https://doc.can-nx.com/en/poolnx-version-poolcop">https://doc.can-nx.com/en/poolnx-version-poolcop</a> , or the description of Valve_Position_Code_Text signal below. |
| Poolcop_English_Text        | S  | Serial signification of the Poolcop system's status.<br><br>To see all the possible codes and their signification, visit this documentation: <a href="https://doc.can-nx.com/en/poolnx-version-poolcop">https://doc.can-nx.com/en/poolnx-version-poolcop</a> , or the description of Poolcop_Code_Text signal below.  |



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| Air_Temperature_Text     | S | Serial value of the air temperature.<br>Has the unit " °C " at the end. (ex: 20.5 °C)   |
| Water_Temperature_Text   | S | Serial value of the water temperature.<br>Has the unit " °C " at the end. (ex: 20.5 °C)   |
| Water_Level_English_Text | S | Serial signification about the water level of the pool.<br><br>To see all the possible codes and their signification, visit this documentation: <a href="https://doc.can-nx.com/en/poolnx-version-poolcop">https://doc.can-nx.com/en/poolnx-version-poolcop</a> , or the description of Water_Level_Code_Text signal below. |

**FEEDBACK: (ALL FUNCTIONS):**

|                          |   |   |
|--------------------------|---|---|
| pH_Analog                | A | Analog value of the pH. Has been multiplied by 10 to keep a 0,1 precision.  |
| pH_Text                  | S | Serial value of the pH.   |
| pH_SetPoint_Analog       | A | Analog value of the pH setpoint.  |
| pH_SetPoint_Text         | S | Serial value of the pH setpoint   |
| pH_Measure_Date_Text     | S | Date of the last pH measurement. Date has a format "dd/MM/yyyy"<br>(Ex: 16 March 2023 = 16/03/2023)   |
| Orp_Analog               | A | Analog value of the ORP. Has been multiplied by 10 to keep a 0,1 precision.   |
| Orp_Text                 | S | Serial value of the ORP.<br>Has the unit " mV " at the end. (ex: 600 mV)  |
| Orp_SetPoint_Analog      | A | Analog value of the ORP setpoint. Has been multiplied by 10 to keep a 0,1 precision.  |
| Orp_SetPoint_Text        | S | Serial value of the ORP setpoint.<br>Has the unit " mV " at the end. (ex: 600 mV)   |
| Air_Temperature_Analog   | A | Analog value of the air temperature. Outdoor temperature<br>Has been multiplied by 10 to keep a 0,1 precision.  |
| Air_Temperature_Text     | S | Serial value of the air temperature. Outdoor temperature.<br>Has the unit "°C" at the end. (ex: 20 °C)  |
| Water_Temperature_Analog | A | Analog value of the water temperature. Has been multiplied by 10 to keep a 0,1 precision.   |
| Water_Temperature_Text   | S | Serial value of the water temperature.<br>Has the unit "°C" at the end. (ex: 20 °C)   |
| Water_Level_Analog       | A | Analog value of the water level. Has 5 different values:<br>0d = Default<br>1d = Low Level<br>2d = Normal level<br>3d = High level<br>4d = Very high level<br><br>To directly have the textual meaning of the code, use <Water_Level_English_Text>. |
| Water_Level_Code_Text    | S | Serial value of the water level. Has 5 different values:<br>0 = Default   |



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|  |   | 1 = Low Level<br>2 = Normal level<br>3 = High level<br>4 = Very high level<br><br>To directly have the textual meaning of the code, use <Water_Level_English_Text>.   |
| Water_Level_English_Text                 | S | Serial signification about the water level of the pool.   |
| Pressure_Analog                          | A | Analog value of the pressure. This indicates the water pressure at pump output.<br>Has been multiplied by 10 to keep a 0,1 precision.   |
| Pressure_Text                            | S | Serial value of the pressure. This indicates the water pressure at pump output.<br>Has the unit " mBar " at the end. (ex: 850 mBar).  |
| Valve_Position_Analog                    | A | Analog value of the valve position.<br>0d = Filter<br>1d = Waste<br>2d = Closed<br>3d = Bypass<br>5d = Rinse<br>9d = Rotation in progress<br><br>To directly have the textual meaning of the code, use <Valve_Position_English_Text>. |
| Valve_Position_Code_Text                 | S | Serial value of the valve position.<br>0 = Filter<br>1 = Waste<br>2 = Closed<br>3 = Bypass<br>5 = Rinse<br>9 = Rotation in progress<br><br>To directly have the textual meaning of the code, use <Valve_Position_English_Text>.       |
| Valve_Position_English_Text              | S | Serial signification about the valve position.  |
| Battery_Voltage_Analog                   | A | Analog value of the battery voltage. Has been multiplied by 10 to keep a 0,1 precision.   |
| Battery_Voltage_Text                     | S | Serial value of the battery voltage.<br>Has the unit "V" at the end. (ex: 95 V).  |
| Pump_Speed_Analog                        | A | Analog value of the pump speed.   |
| Pump_Speed_Text                          | S | Serial value of the pump speed.   |
| Pump_Number_of_Speed_Analog              | A | Analog value of the number of speed available for the pump.   |
| Pump_Number_of_Speed_Text                | S | Serial value of the number of speed available for the pump  |
| Pump_Low_Pressure_Alarm_Threshold_Analog | A | Analog value of the pump's low pressure alarm. This represents a limit that the pressure must not go under, otherwise it will trigger an alert/alarm.<br>Has been multiplied by 10 to keep a 0,1 precision.                           |
| Pump_Low_Pressure_Alarm_Threshold_Text   | S | Serial value of the pump's low pressure alarm. This represents a limit  |



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|                          |   | that the pressure must not go under, otherwise it will trigger an alert/alarm.<br>Has the unit " mBar " at the end. (ex: 850 mBar).  |
| Poolcop_Analog           | A | Analog value of the system status.<br>0d = Pump stopped<br>1d = Freezing risk<br>2d = Forced mode<br>3d = Automatic mode<br>4d = Timers mode<br>5d = Manual mode<br>6d = Pause between two cycles<br>7d = External request<br>8d = Level management for Rimflow pool<br>9d = Mode 24h<br><br>To directly have the textual meaning of the code, use <Poolcop_English_Text>. |
| Poolcop_Code_Text        | S | Serial value of the system's status.<br>0 = Pump stopped<br>1 = Freezing risk<br>2 = Forced mode<br>3 = Automatic mode<br>4 = Timers mode<br>5 = Manual mode<br>6 = Pause between two cycles<br>7 = External request<br>8 = Level management for Rimflow pool<br>9 = Mode 24h<br><br>To directly have the textual meaning of the code, use <Poolcop_English_Text>.         |
| Poolcop_English_Text     | S | Serial signification of the Poolcop system's status.   |
| Ioniser_Analog           | A | Analog value of the ioniser. Has been multiplied by 10 to keep a 0,1 precision.  |
| Ioniser_Text             | S | Serial value of the ioniser.<br>Has the unit "mA" at the end. (ex: 95 mA).   |
| Alert_[1-5]_Analog       | A | Analog value of the alert.<br>To see all the possible codes and their signification, visit this documentation : <a href="https://doc.can-nx.com/en/poolnx-version-poolcop">https://doc.can-nx.com/en/poolnx-version-poolcop</a>  |
| Alert_[1-5]_Code_Text    | S | Serial value of the alert.   |
| Alert_[1-5]_English_Text | S | Serial signification of the alert.   |
| Alert_Count_Analog       | A | Analog value of the alert count.   |
| Alert_Count_Text         | S | Serial value of the alert count.   |
| Auxiliary_[1-6]_is_ON    | D | Gives the status of the auxiliaries.<br>High/1 = Auxiliary in ON, Low/0 = Auxiliary is OFF   |
| do_Alert                 | D | Inform if at least one alert in ON   |



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|                          |   | Higj/1 = Alert ON, Low/0 = Alert OFF  |
| Pool_Is_Connected        | D | Inform if the pool in connected to the cloud.<br>High/1 = Pool connected, Low/0 = Pool disconnected |
| Auto_Water_Filling_is_ON | D | Inform if the auto filling is enable<br>High/1 = Auto filling is ON, Low/0= Auto filling is OFF     |
| Backwash_Date_Text       | S | Date of the previous Backwash. Date has a format "dd/MM/yyyy" (Ex: 16 March 2023 = 16/03/2023)      |
| Refill_Date_Text         | S | Date of the previous refill. Date has a format "dd/MM/yyyy" (Ex: 16 March 2023 = 16/03/2023)        |

### PARAMETERS:

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| IP_Address | S | IP address of the pool'nX device in which the TCP server is launched. |
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### TESTING:

|                                  |                              |
|----------------------------------|------------------------------|
| OPS USED FOR TESTING:            | MC3 1.502.4324.33148         |
| SIMPL WINDOWS USED FOR TESTING:  | 4.2200.00.03                 |
| DEVICE DB USED FOR TESTING:      | 200.265.001.00               |
| CRES DB USED FOR TESTING:        | 218.00.001.00                |
| SYMBOL LIBRARY USED FOR TESTING: | 1180                         |
| SAMPLE PROGRAM:                  | Poolnx_Poolcop v1.0 Demo.smw |
| REVISION HISTORY:                | v1.0                         |