

PX 1000

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1. Introduction

The PX 1000 greatly expands the monitoring and control potential of the AquaController 3 or the AquaController 3 Pro. Each PX 1000 will add the following functionality:

- Monitor/Control pH, ORP, and temperature or 2 pH and temp probe.

- 6 digital inputs for float switches, water on floor sensors, pressure sensors, etc.

- Full datalogging support in AquaController and AquaNotes. (1024 data points per measured parameter)

- Up to 7 expansion modules can be used. For an AC3 that would make a total of 24 probes, and 42 digital inputs.

- Attaches to AquaController 3's I/O port with a 5' cable.

- Automatic Plug N Play PX 1000 module detection.

- Additional Expansion modules daisy chain off the previous expansion module.

2. Installation

The firmware in the AC3 or AC3Pro must be at least version 3.10 for it to recognize the PX 1000. The version of the firmware can be found by doing a self test on the controller. The latest firmware can be downloaded from the support section of www.neptunesys.com. If the firmware is being upgrade from version 3.0 to 3.1, then make sure to save the AquaController's program configuration before upgrading the firmware. The internal program statement structure has changed slightly, and the probe names may change after the firmware upgrade.

The probe expansion feature in the AquaController must be enabled before, the PX 1000 will be recognized. On the setup menu enable, make sure that Probe Exp: is turned on. The AquaController must be rebooted before this change takes effect.

The Probe Expansion cable plugs into the I/O port of the AC3 or the AC3Pro or the expansion port of the previous expansion module. Power for the PX 1000 is supplied by the included AC adapter. Only every third PX 1000 needs to be powered from an AC adapter. When the PX1000 is plugged into the I/O port, the AquaController will sense the expansion module and display an insertion event on the run display. To confirm that the expansion module has been successfully installed press the 'Up' button while the controller is in the 'Run Display'. Each 'Up' button press will cycle through the status of the installed probes.

Calibration

To calibrate the pH, temperature, and ORP probes use the same procedure as described in the AquaController owner's manual. The only additional step is selecting which probe to calibrate before the actual calibration procedure begins. For example to calibrate the pH probe go to the setup->pH setup->pH calibrate menu. Press the up or down buttons to scroll the installed pH probes, and when the correct one is displayed press the select button. From this point the calibration procedure is identical to the procedure described in the owner's manual.

3. Configuration

The syntax for referencing the new probes in the AquaController's program is very similar to the base probes. All probes follow the same basic format: Base Name of the probe, followed by Expansion Box letter, and probe number if required. Legal probes names are:

pH pH, pH1, PH2, PHA1, PHA2, PHB1, PHB2, PHC1, PHC2 ... PHG1, PHG2

Temp Tmp, TmpA, TmpB, TmpC, TmpD, TmpE, TmpF, TmpG

ORP ORP, ORPA, ORPB, ORPC, ORPD, ORPE, ORPF, ORPG

Switch Switch1, Switch2, Switch3, Switch4, SwitchA1, SwitchA2, SwitchA3, SwitchA4, SwitchA5, SwitchA6, SwitchB1, SwitchB2, ... SwitchG4, SwitchG5, SwitchG6.

Following are some legal program statements (assumes that probe Expansion module A is installed).

If TmpA > 80.0 Then COL ON

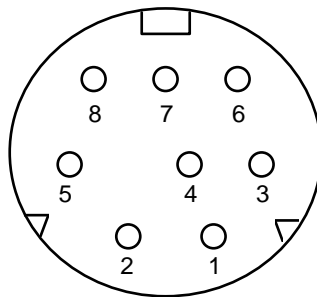
If pH A2 > 8.50 Then ALM ON

If ORPA > 430 Then ALM ON

If SwitchA2 CLOSED Then PMP OFF

4. Input Connector Pinout

Following is the pinout of the input port (Minidin 8). This diagram assumes that you are looking at the connector on the AquaController III Pro.



Input/Output Port Connector

Pin Number	Description
1	Input #1
2	Input #2
3	Input #3
4	Input #4
5	Input #5
6	Input #6
7	Reserved
8	Ground

Input/Output Port Signal Description

Any dry contact switch can be connected to any of the AquaController III Pro's digital inputs. No external voltage source is required. One wire from the mechanical switch should connect to the ground pin (pin 8), and the other wire from the switch should connect to one of the six digital inputs (pin 1, 2, 3, 4, 5 or 6).

Neptune Systems Limited Warranty

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For your protection, items being returned must be carefully packed to prevent damage in shipment and insured against possible damage or loss. Neptune Systems will not be responsible for damage resulting from careless or insufficient packaging. Before returning please obtain a return authorization (RMA) number from Neptune Systems at (408) 578-3022. Returned merchandise will not be accepted without a RMA number.

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