Aqua-X Pro System / NFS-2

Aqua -X Pro Irrigation Control System

The NFS-2 controller from TrolMaster is one of the most advanced irrigation controllers available today. The NFS-2 is a multi-functional controller which can control multiple irrigation solenoids and pumps.

NFS-2 for Aqua-X Pro Control System

The NFS-2 can also monitor multiple water sensors that can measure pH, EC, temperature, and water content sensors. There is also a new optional DFW-1 flow-meter that serves multiple functions. Each of the solenoids and pumps can be "linked" to work together so that multiple growing areas can be controlled by a single NFS-2.

When combined with the optional AMP-3, WCS-1, WCS-2 sensors and the new DFW-1 flow-meter, the NFS-2 allows the user to monitor up to 50 sensors and receive mobile notifications when any problem is detected by the system.

The NFS-2 was created to allow users to customize their irrigation cycle and be able to control the irrigation events by using either the DFM-1 digital flow-meter, WCS-1, or WCS-2 moisture content sensors or by simple timers. Each device controlled by the NFS-2 can conceivably have an unlimited number of irrigation "events" each 24 hour day.

Specification

AQUA-X PRO (NFS-2)

Power Supply

Supply Voltage	100-240VAC 50/60Hz

Product Capacity

Pumps & Valves Capacity

Valve Line

Max. Up to 300 Valves in Total	Up to 50 Control Modules in Combination Related Modules: OA6-24, DSP, DSD, DSV, OM8

Pump Line

Max. Up to 300 Pumps in Total	Up to 50 Control Modules in Combination Related Modules: OA6-110, DSP, DSD, DSV, OM8

Display & Control

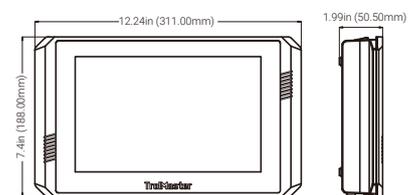| Size	10.1" LED Screen
Control	Touchscreen
Language	English (International)
USB	Save / Copy / Import / Export data / Firmware Update

Water Sensors & Detectors

Water Sensor Line & Detector Line

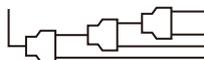| Max. 50 Sensor Boards and Water Detectors in Total	Up to 50 Sensors & Detectors in Combination • AMP-3, PPH-1/2/3, PCT-1/2/3 • WD-1/2 • WCS-1/2 • DFM-1/2

Package Contents

Aqua-X Pro Irrigation Controller	1
AMP-3 Sensor Board	1
12V Power Adapter	1

Dimensions & G.W.

Dimensions	380*270*85mm 0.5A
Approx. G.W.	2.98kg

12.24in (311.00mm)   1.99in (50.50mm)

7.4in (188.00mm)

Connection

with RJ12 Splitter Hubs

The sensors and control modules (device stations) are connected to the NFS-1 with a standard RJ12 cable and RJ12 Y-splitters, making installation as simple as plug-and-play. The modules are "daisy-chained" together using the RJ12 cables allowing for flexible installation, and future expansion. To make installation even easier, you can also use the SPH-1 8-port hub instead of using the Y-splitters.

Remote Control
Mobile App

Besides the onboard user interface / touch-screen, the Trolmaster app will provide real-time data and user notifications from the NFS-2. The NFS-2 also offers a free web-based software program that allows remote control and monitoring through the internet with any desktop, laptop, smartphone or tablet. To access the online software, simply login with your app email and password at pro.trolmaster.com

Steps To Connect To The App

To connect the NFS-2 to your App, first connect it to the Internet. Use a CAT 5/6 cable to connect the NFS-2 to your router directly for the most reliable connection. When the controller is connected to the internet, the internet symbol will be displayed on the lower right corner of the LED display. To link the NFS-2 to the App, simply open the TM app and scan the QR code on the front LED screen of the controller. (Go to System – QR Code.)

Control
with Aqua -X Pro System

There are 2 control lines in NFS-2, Pump Line & Valve Line, which can link with device modules like the OA6-110&24, DSP-1&2, DSD&V, and OM8 to control pumps/valves.
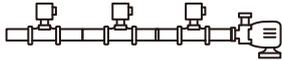
*Allows up to 50 schedules per day

Max. 600 Pumps & Valves

Each NFS-2 allows up to 50 control modules to be connected. When using the OA6 series of control modules, which can maximum control 300 Pumps & 300 Valves in each line.

Master Pump Link

Master Pump Link functions by allowing users to employ multiple pumps, linked together with multiple groups of solenoids. The improved Master Pump Link function on the Aqua-X Pro will allow the user to control multiple water/booster pumps, with each pump assigned to only run with a selected group of solenoids.

OA6-110 — 110/240 V
110V Devices
Pumps/Valves (< 1.5A)

OA6-24 — 24 V
24V Devices
Solenoid Valves/Pumps (< 0.2A)

The OA6 series both have 6 separately controlled outlets, each with individual time setting.

DSP-1&2
Any device up to 10 amps
- at 120V or less for DSP-1
- at 240V or less for DSP-2

DSD-DSV
Any device with 24V
- Dry Contact Station
- Low-Volt Station

OM-8
Any device with 24V
- Equal to 8pcs of DSD-1 Dry Contact station.

Medium Monitoring
Moisture level, EC, Temperature

The WCS is a water content sensor allows the user to monitor the growing medium parameter.

WCS-1
The WCS-1 sensor measures moisture level only.

WCS-2
WCS-2 can measure medium temperature, EC, and moisture level.

Water Detection
Water Leaking

WD-1/2
The WD-1/2 can detector water leaking.

Water Monitoring
Volume & Speed

DFM-1/2
DFM-1/2 digital flow meters, can be used to measure the amount of liquid flowing through a fluid pipe. It provides monitoring on the speed and volume of your irrigation schedules.

pH, EC, Temperature

The PPH and PCT sensors can be connected to the system by using the AMP-3 Sensor Board to detect pH, and EC & temperature of the water respectively.

PPH/PCT-3
Reduced diameter protective sleeve that allow the probe to be installed into standard 3/4" PVC tee fittings. (can be used both in-line and in the reservoir.)

PPH/PCT-1
Designed to be used in an open stock water tank.

PPH/PCT-2
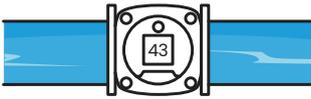Designed to be used inline with existing PVC piping.
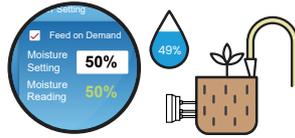
Advanced Features

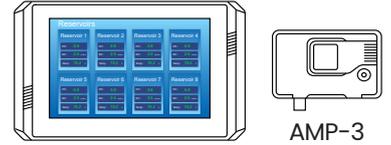## New Features in Aqua-X Pro

Feed by Volume

Used a DFM-1 with Aqua-X Pro to have accurate measurements of water or a nutrient solution flowing through a fluid pipe. Users can monitor the speed and volume of your irrigation schedules. The Feed by Volume function allows users to set the irrigation schedule to be controlled "By volume", the DFM-1 will then measure and allow the desired and precise amount of nutrient solution to be dispensed. This unique Feed-by-Volume function offers you an option to feed by controlling the volume of nutrient water used rather than the feeding duration.

Feed On Demand (with WCS-1/2)

The Aqua-X Pro can automatically water your plants based on that water content reading when used with the Water Content Sensors. Aqua-X Pro constantly measures the water content within the grow-media and will activate the irrigation cycle when the Water Content goes below the user's pre-selected %. The user can also select the time of day that the Aqua-X Pro will automatically activate the irrigation devices on each of the controlled irrigation outputs. The WCS water content sensors will keep on monitoring the moisture level within the grow medium 24/7.

* The Feed-on-Demand feature works on both the WCS-1 & WCS-2 sensors when used with the Aqua-X Pro.
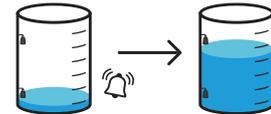
Multi-Zone Monitoring

The new AMP-3 has been specially designed for the Aqua-X Pro system. The redesigned AMP-3 Sensor Board used standard RJ12 cable in place of the specialized DIN connection used on the AMP-2. The AMP-3 acts as a "bridge" between the sensors (pH Sensor & EC/Temp Sensor) and the Aqua-X Pro Controller with no real limit on the maximum distance between the AMP-3 and the Aqua-X Pro controller. Users can now monitor up to 50 stock water tanks or inline Dosatron dosing systems, and control up to 300 pumps/solenoids with an Aqua-X Pro controller. Each pump & solenoid can be set with an individual timer or control settings.

Calendar Control

Build and schedule your entire crop's irrigation recipe with the built-in control and calendar presets on the Aqua-X Pro. All settings including pump, valve, water flow and timers can be specified by you as you build your multi-week crop schedules. Reminders can also be programmed to ensure critical tasks are never forgotten.

Auto-Fill (with WD-1/2)

The Auto-fill function on the Aqua-X Pro uses 2 water detectors (WD-1) which will be installed in your nutrient tank. One water detector will be positioned at the bottom of the tank and one at the top of the tank. When the liquid level drops below the bottom sensor, the Aqua-X Pro will activate a solenoid, or pump and the tank will fill back up to the sensor at the top.