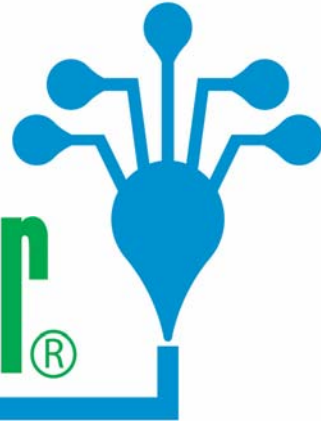*patent pending*

HydraMeter®

User Manual

Installation & Operational User Manual for All HydraMeter Configurations

Introduction

Congratulations... You have selected the most advanced and diverse water management device available. With engineering inspiration, Seco Sys has designed and developed the HydraMeter to be the first fully comprehensive water management device ever conceived. The HydraMeter is an ultra-intelligent water meter controller that mounts atop many common water meters. In its application, users can have visibility and control of water consumption in a way never obtained before. Like Hydra, the powerful multi-headed water serpent of Greek mythology, Seco Sys' HydraMeter has several metering personalities and modes of operation. This unique ability makes it possible for the HydraMeter to tackle nearly any water management task, setting it apart from other available water management devices.

Key features are as follows:

- Advanced flow measurement and processing for flow-rate, flow-time and flow-volume.
- Independent control of master valves and pumps.
- Configurable water budget management with automatic alarm response.
- Direct interface with flow sensor compatible control systems.
- Internet communication capable.

The HydraMeter facilitates a single solution for all water management requirements. The HydraMeter controller is completely scalable and mounts to nearly any AWWA approved water meter, allowing it to easily integrate and

This manual is intended for the stand-alone operation of a HydraMeter and an attached valve. In this application, all alarm responses result in water being shut off. If a HydraConnect is added to the iDrop, audible alarms and internet connectivity are added. Online programming of the HydraMeter can then be done from your cloud-based WaterUseOnline.com dashboard. From there, text message, email or voice message alerts (with or without valve shut off) can be triggered in response to alarms.

manage water for small or large water delivery systems. To take full advantage of the many personalities and features of your HydraMeter, please take the time to review this user manual.

This guide is intended to be a general overview, and is NOT a plumbing "How To." If you are not experienced in water meter installation, or have any doubts as to your abilities,

please seek out a qualified installer. If you are doing your own installation, be aware that you are doing so at your own risk and Seco Sys will not be held liable for failures due to improper installation procedures.
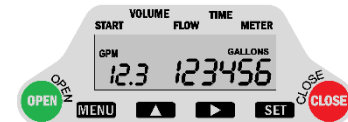
HydraMeter Specifications

BASIC METERING FEATURES

- Acquires flow measurement resolution from AWWA water meters.
- Measures flow down to .04/gallons per minute with zero drag.
- Multiple character LCD display to interpret water consumption and alarms.
- Configurable units of measure (Gallons or Liters)
- Simultaneous display of flow rate and accumulated volume.

OPERATING FEATURES

- Multi-mode keypad interface for direct configuration.
- Manual control keys to Open or Close a connected valve.
- Rechargeable Lithium Ion Polymer Battery

CONTROL FEATURES

- Control output for electric valve (Motorized or DC Latching type).
- Configurable limit alert by flow-time: limits how long a flow event is permitted to run.
- Configurable limit alert by high flow-rate: limits the highest flow rate permitted for any event.
- Configurable limit alert by low flow-rate: limits the lowest flow rate permitted for any event.
- Configurable limit alert by flow-volume: limits the volume of water delivered for any event.
- Configurable leak rate detection independent of low flow-rate.
- Configurable water-window schedules, up to 4 per day.
- Flow-time limits can be set to 16 hours 39 minutes, in one-second increments.
- Optional output for booster pump control, activated by user defined flow rate.
- Pulsed flow output signal to share live flow rate data with compatible equipment.
- Independent programmable alarm delay time for all limits.
- Connectivity for networking multiple HydraMeters, up to 19 in cascaded configuration.

AVAILABLE OPTIONS

- Ability to connect to the internet using SecoNet via HydraPod or HydraConnect.
- Ability to operate in remote locations using solar power from a HydraPod.
- Ability to share flow data with SCADA and other compatible third party equipment

MECHANICAL SPECIFICATION

- Durable, fade resistant injection molded plastic enclosure with hinged lid
- Water tight transparent cover with valve control access
- Liquid tight cord-grip connection ports

- Dimensions:
  - 4 1/4W x 3H x 5 1/2D inches /107.95W x 76.2H x 139.7D mm (without meter adapter)
- Shipping Weight: 12.3 Ounces (without meter adapter)

ELECTRICAL SPECIFICATIONS

- Input power: 12 VDC, 50mA MAX
- Reserve Power: 3.7v Lithium Ion Polymer Battery
- Output Valve Control: 12 VDC Latching or Continuous Current, 1.5 Amp Max impulse.
- Output Valve Control:
  - Type - DC Latching or Continuous Current
  - Power - 12 VDC, 1.5 Amp Max Impulse Current
- Optional Pump Control:
  - Type - Non-Latching Relay Coil
  - Power - 12 VDC, 50mA Max

WARRANTY

- 5 year limited warranty