



HYDRUS

Smart Start Controller, Base

Design Specifications

Control Circuit Board, Non-PLC Programming Onboard – Pushbutton and DIP Switches

Connections

Inputs
Pressurized Water 1/4" Quick Connect
Electrical

Internal Power Supply 6 VDC Battery Pack
External Power Supply 12 VDC Power Supply

Backwash/Regeneration Control

Alarm Low Salt, 10 Minutes
Reset Countdown, 1 Minute
Regen Dry Contact, 5 Seconds
Delta P Dry Contact, 15 Minutes

Outputs

Pressurized Water 1/4" Quick Connect
Alarm Low Battery Probe, Cl 18 VDC

Physical

Size (DxWxH) 5.5" x 4.5" x 6.8"
Weight 1.5 pounds
Mounting Wall or Pipe Bracket

Components

Inline Filter 1/4" Quick Connect
Bi-Stable Solenoid 1/4" Quick Connect

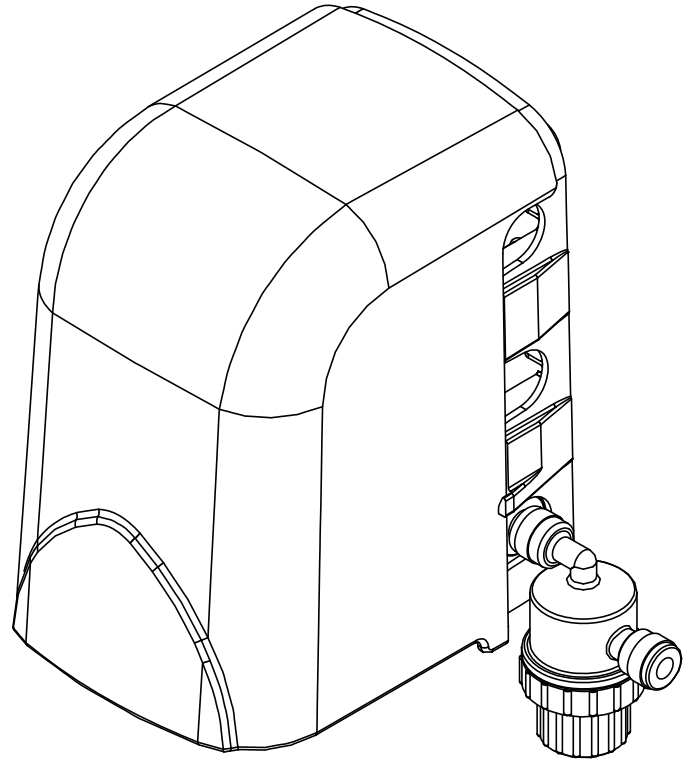
Optional Input Devices

Ion Exchange Remote Reset Meter
Macrolite® Filtration Pressure Differential Switch
Carbon Filtration None
Calcite Neutralization None

Operational Modes

Day 1 – 7 Days
Countdown Timer 1 – 99 Hours
Input* Dry Contact

*Programmable in either Immediate (IMM) or Delay (DLY) Mode.



Part Numbers

<i>Smart Start Controllers</i>	<i>Number</i>
With 120 VAC, 50/60 Hz North American Power Supply.....	12137
Without Power Supply	12691
<i>Power Supplies</i>	
North American, 120 VAC, 50/60 Hz	12128
Europe, 220 VAC, 50 Hz	12129
United Kingdom, 220 VAC, 50 Hz	12130

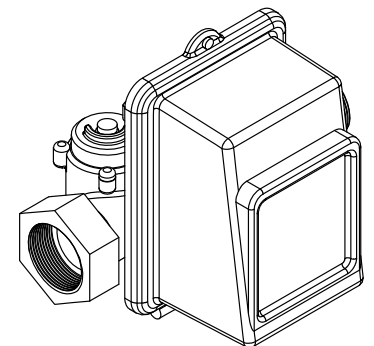
Remote Reset Meters

60 Hz, 120 VAC

<i>Diameter</i>	<i>Flow Range, gpm</i>	<i>Volume, gallons</i>	<i>Part Number</i>
2" Brass Meter.....	3 – 150.....	6,250 – 106,250.....	70141
2" Plastic Meter	3 – 150.....	6,250 – 106,250.....	70143
3" Brass Meter.....	7 – 300.....	3,750 – 63,750.....	70145
3" Brass Meter.....	7 – 300.....	18,750 – 318,750.....	12312

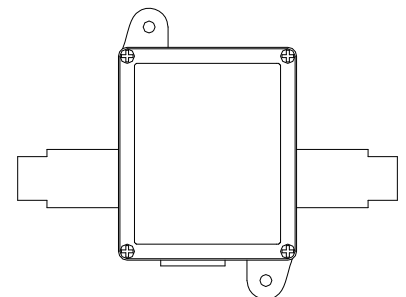
50 Hz, 220 Volt

<i>Diameter</i>	<i>Flow Range, gpm</i>	<i>Volume, gallons</i>	<i>Part Number</i>
2" Brass Meter.....	3 – 150.....	6,250 – 106,250.....	72611
3" Brass Meter.....	7 – 300.....	3,750 – 63,750.....	72613
3" Brass Meter.....	7 – 300.....	18,750 – 318,750.....	12313



Differential Pressure Switch

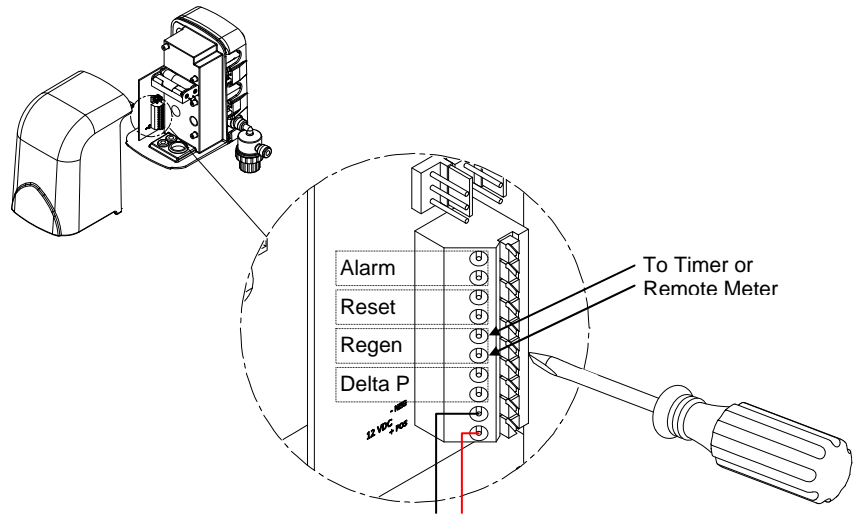
<i>Connection</i>	<i>Setpoint Range, psid</i>	<i>Repeatability</i>	<i>Part Number</i>
1/4" NPT.....	0 – 25.....	± 1%.....	59256



Smart Start Controller

Kinetico's Smart Start Control box allows a versatile system set-up. A single controller can start the sequential regeneration or backwash of multiple valves, regardless of their application. Multiple softening or filtration systems can be initiated with the same signal. For systems using multiple valves that require independent control, one Smart Start controller is required for each valve.

The Smart Start controller has three basic operating modes: a day mode with a 7-day selection, a countdown timer used to set times between regenerations or backwashes and/or an input mode to start a backwash or regeneration when a signal is received from an external device.



External Inputs

Additional, external inputs can be used to further configure the operation of the Smart Start. For each of these signals, it is important to only use dry, non-power contacts. Applying external voltage to the Smart Start board through these inputs will damage the board.

Remote Meters, Immediate Regeneration Only

The remote reset meter monitors the service flow at the control outlet with the meter impeller being the only moving part in the stream. As the turbine turns, its rotation drives a water-lubricated gear train in the dome of the meter. As the output shaft at the top of the meter rotates, the cable connection to the timer clutch assembly turns the meter program wheel on the face of the timer counterclockwise until it reaches the regeneration stop position. Regeneration may occur immediately or on a delayed basis depending upon Smart Start Setting.

Kinetico modifies the meter from its original configuration to allow it to interface with the Smart Start controller, which directs the Hydrus valve's operation.

Differential Pressure Switch

A pressure differential switch monitors the pressure difference between the inlet and the outlet streams and trips when it reaches a preset differential pressure. It's designed with two separate, opposing sensors which are connected by a rod to actuate a switch. The actuation produces a dry contact, which is sensed by the Smart Start controller. The Smart Start controller is thus triggered to produce the hydraulic signal required to initiate the backwash sequence.

There is no voltage required by the unit.