

# Sequence Controllers

## Design and Construction

The Sequence Controller has been designed with the customers' specific requirements in mind. The Sequence Controller provides an effective automatic backwashing cycle with minimal water loss.

The Sequence Controller has been constructed with state-of-the-art industrial components. This allows for the replacement of individual components without having to replace an entire circuit board. The components are more durable and reliable and adjustments can be made with ease.



## Standard Features

- Enclosure - Nema 4
- Adjustable Cycle Timer
- Off-delay Timer
- Motor Starters with Auxiliary Contact and Overload Relay
- Selector Switch
- Indicating Lights
- Fuses
- Terminal Block

## Modes of Operation

The Sequence Controller provides two modes of operation; intermittent and continuous. By turning the selector switch, the mode of operation can be selected.

### Automatic Intermittent Position

With the selector in the "Auto" position, the drive motor will start and the backwash valve opens as determined by the adjustable cycle timer or by the differential pressure switch.

The differential pressure switch is normally factory set at 1 - 1-1/2 psig over the anticipated clean pressure drop. Should a high differential pressure occur during the timed off period, the differential pressure switch will override the cycle timer and start or continue the backwash until the differential pressure is satisfied.

After the differential pressure has been satisfied, the strainer will continue to backwash for an additional 60 seconds (time delay relay).

The automatic self-cleaning strainer would start a backwash cycle based on the timed sequence selected on the adjustable cycle timer. The timed sequence should be determined by each installation and the conditions experienced. The adjustable cycle timer can be programmed from 15 minutes to a 10-hour cycle (off) and for 1 to 10 minutes duration (on). Adjustments can be made as conditions warrant. The default factory settings for timers are 2 hours OFF and 2 minutes ON.

## Continuous Operation

Continuous mode can be achieved by moving the selector switch to the "Manual" position. In continuous mode the backwash valve will be open and the drive motor will be running resulting in continuous backwash. This mode of operation may be necessary if the installation experiences high solid loadings.

In either intermittent or continuous mode of operation the backwash assembly is specifically designed to rotate at 2 rpm to allow for effective backwashing in less time. This decreases the amount of backwash water that is lost.

## Standard Control Package

The Sequence Controller Control Package consists of:

- Control Panel with Nema 4 Enclosure
- Backwash Valve with Electric Operator
- Single Element Differential Pressure Switch

## Options

- 230V, 380V, 460V, 575V
- 50 or 60 hertz
- Dual Element Differential Pressure Switch
- Nema 4X (Fibreglass or Stainless Steel), Nema 7 or 9 (Explosion Proof), Nema 12, Nema 3 Enclosures
- Circuit Breakers, Disconnect Switch, Transformer
- Reset Buttons
- Alarms
- PLC Interface and/or Pump Interlock
- Extra Contact and Relays
- Backwash Valve can be supplied with Pneumatic Operator
- Backwash Valve available in numerous materials
- Differential Pressure Switches available with Mercury, Snap Action, Diaphragm or Piston Contacts.

## Codes / Standards

The Sequence Controller can be manufactured to UL Listings, CSA, JIC, NEMA Standards.