

## Introduction

The simplex timed dose Smart Panel™ is a smart relay operated control panel for water and wastewater applications that require timed dosing. The Smart Panel provides information on pump cycles, pump run time and alarm cycles. This panel can be operated by float switches or any switch with any dry contact type level or pressure switch.

## Safety Guidelines



1. DO NOT USE WITH FLAMMABLE OR EXPLOSIVE FLUIDS SUCH AS GASOLINE, FUEL OIL, KEROSENE, ETC. DO NOT USE IN EXPLOSIVE ATMOSPHERES.
2. DO NOT HANDLE WITH WET HANDS OR WHEN STANDING ON A WET OR DAMP SURFACE OR IN WATER.
3. DISCONNECT ALL ELECTRICAL SERVICE BEFORE WORKING ON OR HANDLING.
4. THIS ELECTRICAL PANEL MUST BE INSTALLED AND SERVICED BY A LICENSED ELECTRICIAN IN ACCORDANCE WITH THE NEC NFPA-70, STATE AND LOCAL ELECTRICAL CODES. CABLE CONNECTIONS MUST BE LIQUID TIGHT IN NEMA 4X ENCLOSURES. NEMA 4X ENCLOSURES ENSURE A DEGREE OF PROTECTION AGAINST CORROSION, DUST, RAIN, & SPLASHING WATER FROM ANY ANGLE.
5. TO PREVENT ELECTRICAL SHOCK AND EQUIPMENT MALFUNCTION, USE ONLY WITH A PUMP SUPPLIED WITH A GROUNDING CONDUCTOR.

## Installation

### Mounting & Wiring

Note: Conduit sealant must be used to prevent moisture and gasses from entering the panel. If splicing is required use liquid tight junction box and connectors. Do not mount junction box inside sump or basin. Run control switches in separate conduit from pump and line power.

1. Determine a good location for mounting the control panel.
2. Use the mounting devices supplied with the panel to mount the panel in an upright position, high enough so the panel will not be subject to submersion.
3. Determine the number, size, and location of the conduit locations on the enclosure. Note: control switches require separate conduit from power and pump cables.
4. Drill proper size holes for conduit connectors.
5. Attach cable/conduit connectors to enclosure.
6. Identify and label each wire before pulling through conduit/connectors.
7. Pull cables though conduit/connectors.
8. Tighten connectors/apply conduit sealant.
9. Make connections per panel schematic. Ensure incoming pump and control voltages match that of the panel and pump motors.
10. Power up the panel. After making final adjustments, ensure the panel is operating properly.

### **Sequence of Operation**

#### Hand Mode:

When a HOA switch is placed in “Hand” mode the corresponding pump will be called to run regardless other inputs. Note: When a pump is run in hand mode during a rest period, the rest timer will reset to zero. When pump is run in hand mode during a dose period, the dose timer value will increase.

#### Auto Mode:

When the HOA switches are place into “auto” mode the float switches control when the dose/rest timers will be active (see diagrams on next page for your particular set-up). When the HOA switch is placed from auto to off during a dose the dose timer will retain the value and the timer will resume when the switch is placed into auto or hand mode.

### **Alarm Conditions**

#### High Level Alarm: (model dependent)

The alarm will trigger if the high alarm switch closes. The alarm will reset automatically when the switch opens.

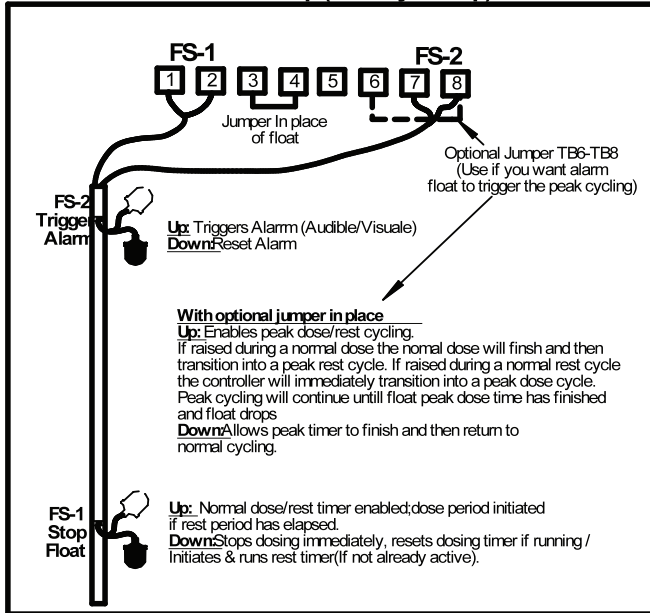
The alarm buzzer may be silenced by toggling the alarm switch to the “silence” position. The alarm may also be tested by toggling the same switch to the “test” position. The panel may or may not contain N.O. auxiliary alarm contacts depending on model.

# Smart Panel™

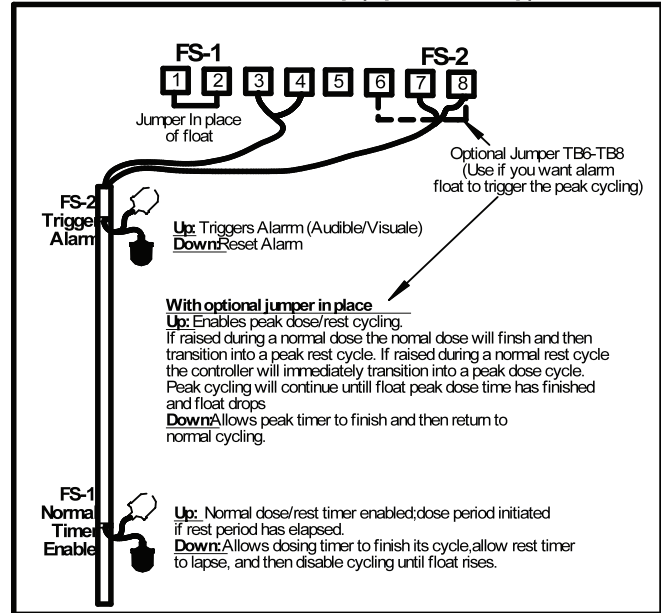
## Simplex Timed Dose

Operation, Maintenance & Installation Manual

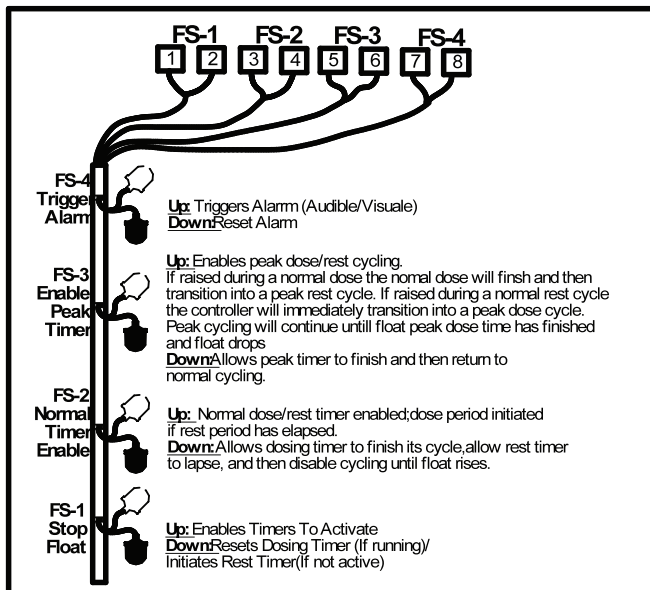
**Diagram#1**  
2 Float Set-up (Factory Set-up)



**Diagram#2**  
2 Float Set-up (Optional Set-up)



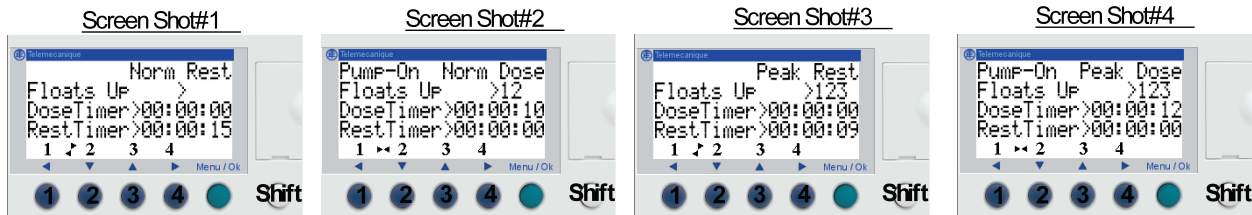
**Diagram#3**  
4 Float Set-up



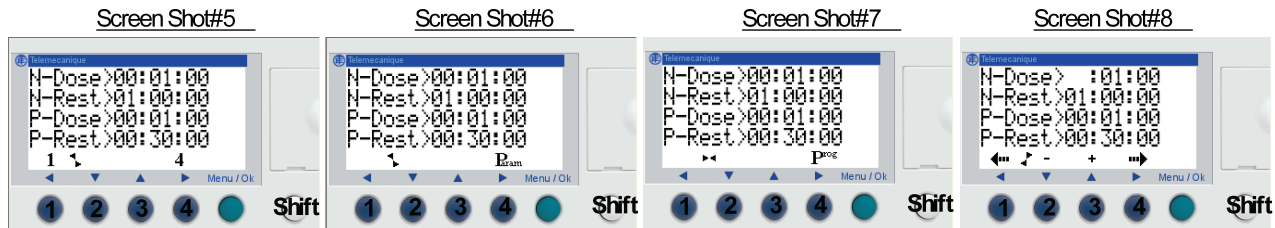
### Controller Display

The controller has 4 main display screens. To scroll between screens press buttons 1 or 4. Follow the instructions below for adjusting timers.

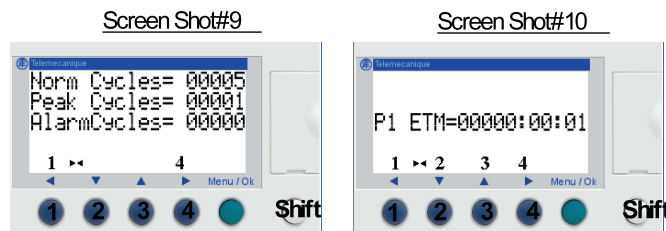
#### Main Display Screen Shots



#### Timer Settings Display Screen Shots



#### History Display Screen Shots



#### Quick Guide: Adjusting Dose & Rest Timers

