

## **SERIES 50 CONTROLLER**

### **Specifications**

Power 120VAC - 240VAC, 50/60 Hz, +10/-15%, 2.5 watts. Input power is auto selected  
Inputs: 3 switch inputs, selectable normally open or normally closed  
Outputs: RO pump 1HP\* max, Inlet solenoid 5A, 20A maximum total load \*Based on service factor of 1.0

### **OPERATION**

When the power switch is turned ON, the center status LED will light Green, the inlet valve will OPEN and the RO pump will START.

Under normal operation the RO unit will run until: (A) the storage tank is full (right LED Amber) or (B) Pretreat lockout has occurred (center status LED Flashing Green). When A or B has cleared, after a time delay, the RO unit will restart, and the center status LED will return to Green. Switch setting 3 selects a 2 second or 15 minute tank full restart time delay.

Upon an alarm signal for Pressure Fault, the left status LED will Flash Red, the RO pump will stop and the inlet valve will close and the RO pump will turn OFF.

If switch 1 and 2 are in the OFF Position (disabled), the left status LED will be a steady RED and the RO will not restart until the Power Switch has been manually cycled OFF then ON to reset the unit.

If switch 1 is in the ON Position (auto reset), every 60 minutes the RO will start and stop again if a pressure fault continues.

If switch 2 is in the ON Position (pressure fault retry), the RO will attempt to restart after 30 seconds, then 5 minutes, then 30 minutes. If the pressure alarm has not cleared after the third try, the RO unit will remain off until manually reset.

If switch 1 and 2 are in the ON Position, after a pressure fault condition, the RO unit will continually attempt to restart after each 60 minute cycle, until the pressure switch input has cleared.

### **Installation**

1. The RO pump motor or motor starter and the solenoid valves must be of the same voltage 120 or 240 volt.
2. Confirm that the (3) input signals - pressure switch, tank level switch and pretreat switch are all of the same configuration, normally open or normally closed.
3. Confirm the desired switch settings for your operation. The switches are factory set to the OFF Position: Auto Reset (disabled), Pressure Fault Retry(disabled), Tank Full restart time delay (2 seconds), Input contact type (NC, open to operate). If you desire to change any switch functions, move that switch to the ON Position. [See Table 1, Switch Selection].
4. Wire to the controller as follows:
  - A. Remove the enclosure cover.
  - B. Mark and drill necessary electrical entry holes in the empty enclosure.
  - C. Terminate necessary wiring to the Quick Connect terminals as required (See Fig. 1). Each terminal is labeled for the proper connection. Terminals P1-P7 are high voltage for power, motor and inlet solenoid. Utilize proper 3 conductor wire size for the appliance. **CAUTION:** The controller is rated for maximum 20 amp total load. Terminal strip P11 is dry contact for input signals from tank full, pressure fault and pretreat lockout. Use small gauge 2 conductor cable for these wire connections.
5. Position and mount the enclosure in the desired location.
6. Connect all wiring to the appropriate appliances (Do not connect to the power source at this time).
7. Reassemble the enclosure, be sure to coil and leave some slack wire inside the enclosure.
8. Connect the power wire 120- 240 volt to its source.
9. Proceed to push the power switch ON and test the completed unit as necessary.
10. Notice the status LED to confirm system status.