

# Series 150

## Reverse Osmosis Controller



### Key Features

- 2-line by 20-character, backlit LCD display
- Multi-function keypad
- Visual and audible alarm
- Programable flush modes and setpoints
- Low pressure automatic reset
- Hinged NEMA 4X enclosure
- TDS/Conductivity monitor and sensor
- Permeate monitor and sensor are temperature compensated

### Application

The Advantage Controls Series 150 Microprocessor Controller is an ideal solution for the monitoring and control of light commercial reverse osmosis units. This economical controller provides relays for the RO pump, inlet solenoid valve, and membrane flush solenoid valve.

The dry contact switch inputs monitor storage tank level, low and high pressure switch signal, and system lockout for pretreatment backwash or regeneration for on/off operation. All inputs and outputs are controlled with time delays for proper operation.

# Build a Model

Model \_ - \_ \_ \_ \_ \_

## Base Control Selection

- S150** = Inlet solenoid, flush time delay, pressure switch, and TDS
- S151** = Model 150 with I/O expander for permeate divert or remote alarm relay, plus auxiliary relay with low tank input
- S152** = Model 150 with second TDS board and sensor
- S153** = Model 150 with second TDS board, sensor, and I/O expander

## Controller Supply Voltage

- 1** = 120 VAC
- 3** = 120 VAC with UL labeling
- 2** = 220 VAC
- 4** = 220 VAC with UL labeling

## Permeate Conductivity Scale

- A** = 0-50 PPM      **J** = 0-50 uS
- B** = 0-100 PPM    **K** = 0-100 uS
- C** = 0-250 PPM    **L** = 0-250 uS
- D** = 0-500 PPM    **M** = 0-500 uS
- E** = 0-1,000 PPM   **N** = 0-1,000 uS

## Second Conductivity Scale

Only available on S152 and S153, use "X" for S150 and S151.

- X** = No conductivity    **F** = 0-2,500 PPM
- A** = 0-50 PPM          **G** = 0-5,000 PPM
- B** = 0-100 PPM        **H** = 0-9,999 PPM
- C** = 0-250 PPM        **J** = 0-50 uS
- D** = 0-500 PPM        **K** = 0-100 uS
- E** = 0-1,000 PPM      **L** = 0-250 uS
- M** = 0-500 uS         **N** = 0-1,000 uS
- P** = 0-2,500 uS        **Q** = 0-5,000 uS

## Communications Type

- 0** = None
- 1** = Ethernet communications - Modbus TCP, Bacnet IP, Ethernet IP

## Enclosure

- A** = 8"x6"x4" poly      **D** = 14"x12"x8" poly
- B** = 10"x8"x6" poly    **E** = 16"x14"x8" poly
- C** = 12"x10"x6" poly   **X** = Enclosure defined in Motor Control model number, or no enclosure

# Specifications

## Power

120-240 VAC, 50/60 Hz, 25 Watts

## Environment

-22°F to 140°F, 0-95% RH, noncondensing

## Enclosure

8"x6"x4" NEMA 4x

## Display:

2 line x 20 character, alphanumeric backlit LCD

## Front Panel

Overlay with LCD window, alarm lamp, 7-key membrane switch

## Relay Outputs

- RO pump relay                      120/240 VAC, 1HP
  - Inlet valve relay                    120/240 VAC, 5A
  - Flush valve relay                  120/240 VAC, 5A
- Relays supply same output voltage as board power (120 or 240 VAC)

## Controls and/or Monitors

- RO high pressure pump motor
- Inlet solenoid valve
- Automatic flush solenoid valve
- Low feed pressure switch
- High pump pressure switch
- RO storage tank level switches (1 or 2)
- Permeate TDS/Conductivity
- Water temperature
- Pre-treatment lockout
- Operating hours

## Optional

- Feed TDS/conductivity
- I/O Expander, permeate divert or remote alarm relay and auxiliary relay with tank-low input

**Get the Advantage**

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