C- 150

Reverse Osmosis Controller

Key Features

- 2-line by 20-character, backlit LCD display
- Multi-function keypad
- Visual and audible alarm
- Programamble 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 Crystal Quest 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

Base Control Selection
C150 = Inlet solenoid, flush time delay, pressure switch, and TDS
C151 = Model 150 with I/O expander for permeate divert or remote alarm relay, plus auxiliary relay with low tank input
C152 = Model 150 with second TDS board and sensor
C153 = 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 C152 and C153, use "X" for C150 and C151.
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"×6"×4" poly   **D** = 14"×12"×8" poly
B = 10"×8"×6" poly   **E** = 16"×14"×8" poly
C = 12"×10"×6" 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