R2-XXX - Conductivity and Float Switch Controller

Pump-Up or Pump-Down, Conductivity and Float Switch Control

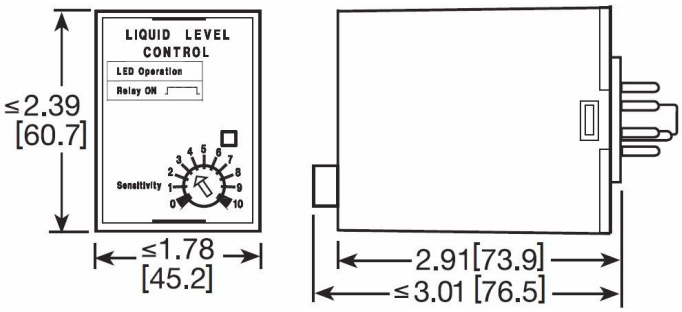
The R2-XXX series solid state controller provides do-it-yourself automatic liquid level control, when combined with float switches or conductivity probes. It is easily configured for Two Level Differential, Single Point Protection or Alarm operations, and can be set for Pump-Up (Fill) or Pump-Down (Drain) automatic dual level control. For conductive liquids, the controller can be set for High - Low liquid level control with three conductivity probes. The conductive liquid is sensed between each probe and ground (common). The controller is also equipped with a sensitivity adjustment to eliminate false actuations in some liquids or foams, and can be adjusted to sense between 1K - 100K Ohms. An easy view on-board LED, on top of the controller, indicates the on-off state to output contacts and controller status.

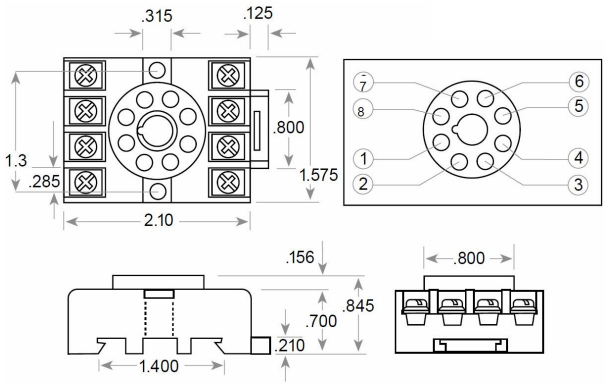
R2-120 (Shown w/ Octal Socket)

Applications

- Dual Probe Liquid Control for Conductive Liquids
- Pump-Up (Fill) or Pump-Down (Drain) Operation
- Sensing or detection of Conductive Liquids
- Boiler Water Level Control

Specifications			
R2-XXX	Conductivity and Liquid Level Control		
Model	R2-120	R2-220	R2-24
Input Voltage	120 VAC	220 VAC	24 VAC
Switches Contacts	Form C - SPDT (Single Pole - Double Throw)	Form C - SPDT (Single Pole - Double Throw)	Form C - SPDT (Single Pole - Double Throw)
Contact Ratings	10 Amp @ 120 VAC (1/5 HP max.), 10 Amp @ 30VDC	10 Amp @ 120 VAC (1/5 HP max.), 10 Amp @ 30VDC	10 Amp @ 120 VAC (1/5 HP max.), 10 Amp @ 30VDC
Temperature (Operating)	-4° to 140°F (-20° to 60°C)	-4° to 140°F (-20° to 60°C)	-4° to 140°F (-20° to 60°C)
Dimension	2.39 H x 1.78 W x 3.01 D (60.7 x 45.2 x 76.5 mm)	2.39 H x 1.78 W x 3.01 D (60.7 x 45.2 x 76.5 mm)	2.39 H x 1.78 W x 3.01 D (60.7 x 45.2 x 76.5 mm)
Mounting Type	8-Pin Octal Socket (Included) w/ Hold-down clips	8-Pin Octal Socket (Included) w/ Hold-down clips	8-Pin Octal Socket (Included) w/ Hold-down clips





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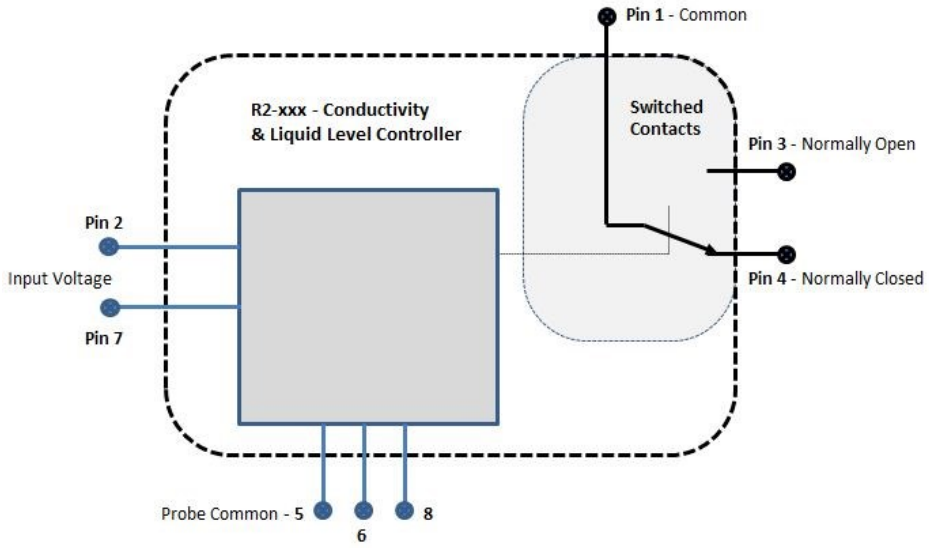
Installation and Maintenance

Input Voltage Models

R2-120 .. 120Vac
R2-220 .. 220Vac
R2-24 .. 24Vac

Output Contacts (1-3 or 1-4)

10 Amps @ 120vac
5 Amps @ 220vac
10 Amps @ 30vdc



Dual Level Conductivity Probe Sensor Configuration

• Wire the “Common Probe” to pin 5 (Common probe to be at/or below the Lower Probe)
• Wire the “Lower Probe” to pin 6
• Wire the “Upper Probe” to pin 8
• Connect the pump/valve circuit power through pins 1-3 or 1-4 to control your load
• Connect (Plug in) the input power to pins 2 and 7

Note: For Single Level Conductivity detection/control, use only pin 5 (Ground Probe) and pin 8 (Level Probe).

Float Switch Pump-Up (Fill) Mode Configuration

- Connect the Upper float switch set Normally Closed to pins 5 and 6,
- Connect the Lower float level switch set Normally Closed to pins 5 and 8,
- Connect the pump/valve circuit power through pins 1-3 to switch your load,
- Connect (power) the input voltage across pins 2 and 7.

With both the Upper and Lower float switches set Normally Closed in an Empty tank, the R2 relay contacts 1 and 3 will “Close” when fluid level falls below the lower float switch, and “Open” after the liquid level reaches the upper float level.

Float Switch Pump-Down (Drain) Mode Configuration

- Connect the Upper float switch set Normally Opened to pins 5 and 8,
- Connect the Lower float level switch set Normally Opened to pins 5 and 6,
- Connect the pump/valve circuit power through pins 1-3 to switch your load,
- Connect (power) the input voltage across pins 2 and 7.

With both the Upper and Lower float switches set Normally Opened in an Empty tank, the R2 relay contacts 1 and 3 will “Close” when fluid level reaches the upper float switch, and will “Open” after the liquid level drops below the lower float level.

Hold-down Clips - 099-P00193 - Can be used to securely mount in place.
Install under octal socket and press up until each bracket snaps on top.

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