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# LSR SERIES LIQUID LEVEL CONTROL SINGLE PROBE

## FEATURES

- Single Probe Level Detection
- Fixed or Adjustable Sensing Resistance to 250K ohms
- 12 VAC On Probes to Help Prevent Plating Action
- 24, 120 or 230 VAC Inputs Available
- Drain or Fill Type Logic
- Mounting Configurations to Retrofit Competition
- Conformal Coated Circuitry to Withstand Humidity
- UL/cUL Recognized

## SPECIFICATIONS

### 1. Control.

- 1.1 Type: Resistance sensing circuitry for pump up or pump down applications with time delay
- 1.2 Sensing Voltage: 12 VAC nominal at probe terminals
- 1.3 Sensing Resistance: Factory fixed or adjustable to 250K ohms
- 1.4 Sensing Resistance Tolerance: Factory fixed  $\pm 10\%$  or adjustable guaranteed range
- 1.5 Time Delay: Fixed 1 - 60 seconds

### 2. Input.

- 2.1 Operating voltage: 24, 120 & 230 VAC,
- 2.2 Tolerance:  $\pm 20\%$  of nominal
- 2.3 Frequency: 50 - 60 Hertz

### 3. Output.

- 3.1 Type: Electromechanical Relay
- 3.2 Form: SPST non-isolated and SPDT Isolated contacts
- 3.3 Rating: Relay = 10 amperes resistive @ 30 VDC, 120/240 VAC
- 3.4 Life: Electrical - full load - 100,000 operations  
Mechanical - 10,000,000 operations
- 3.5 Isolation: 1500 volts RMS min. between input, outputs and probe

### 4. Protection.

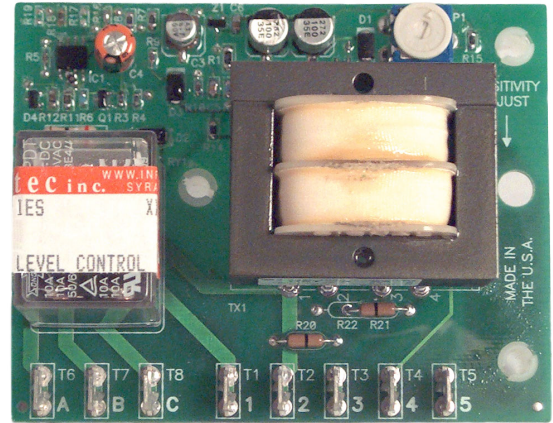
- 4.1 Transient:  $\pm 1500$  volts for 150 microseconds
- 4.2 Dielectric breakdown: 1500 volts RMS minimum

### 5. Mechanical.

- 5.1 Mounting: #6 screw clearance (3 places) or surface mount to probe common with (2) #6 screws
- 5.2 Termination: 1/4" quick connect terminals
- 5.3 Style: Open board/surface mount, conformal coated

### 6. Environmental.

- 6.1 Operating temperature:  $-20^{\circ}\text{C}$  to  $+60^{\circ}\text{C}$
- 6.2 Storage temperature:  $-30^{\circ}\text{C}$  to  $+85^{\circ}\text{C}$
- 6.3 Humidity: Conformal coated to resist humidity



**UL**  
UL/cUL Recognized

File E80165  
UL Guide NKCR2  
cUL Guide NKCR8

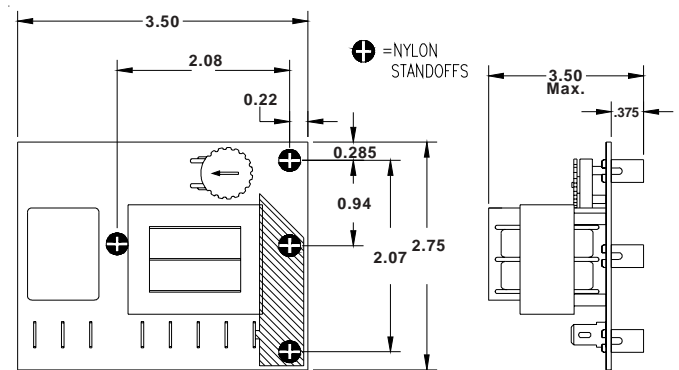
## MODE OF OPERATION - SERIES DRAIN TYPE - LSR\_A

Upon application of power to the input terminals, the output contacts will be de-energized, as long as the liquid is not in contact with the probe. When the liquid comes in contact with the probe, the fixed time delay is initiated. At the end of the time delay, the output contacts transfer to their energized position. When the liquid drops below the probe, the output contacts immediately revert to their original de-energized position.

## FILL TYPE - LSR\_B

Upon application of power to the input terminals, the output contacts will be de-energized, as long as the liquid is in contact with the probe. When the liquid level drops below the probe, the fixed time delay is initiated. At the end of the delay, the output contacts transfer to their energized position. When the liquid contacts the probe, the output contacts immediately revert to their original, de-energized position.

## DIMENSIONS



## ORDERING INFORMATION

SERIES	INPUT VOLTAGE	LOGIC TYPE	TIME DELAY	SENSE RESIST.	MTG.
LSR	4 - 24 VAC 5 - 120 VAC 6 - 230 VAC	A - Drain B - Fill	Specify fixed delay in seconds (1 - 60 sec)	A - Adj. to 250K ohms F - Fixed, specify resistance in 1K ohm increments up to 250K	S - Surface mount X - 3/8" nylon standoffs (three)

## CONNECTION DIAGRAM

