



MADE IN THE U.S.A.

# LEVEL PROBE RELAY

MONITORS CONDUCTANCE PROBE AND PROVIDES PUMP CONTROL OR LEVEL ALARM



UL FILE #E101681

\*UL listed models require use of an SD12 or SD12-PC socket.

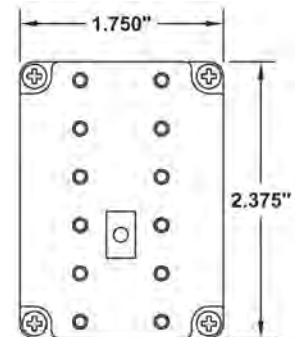
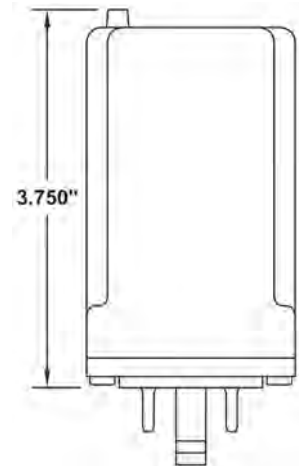


## DESCRIPTION

The Level Probe Relay senses liquid level and provides a relay output for controlling a pump or level alarm. The unit has two inputs, an ON and an OFF, for connection to two electrodes of a conductance probe. All setup is easily done using the seven DIP switches on the unit. When used for a level alarm the ON and OFF inputs may be connected to the same electrode on the probe, or the ON input may be used by itself. When used for pump control the ON and OFF inputs are typically connected to two different level probe electrodes to provide a latching function. The unit has two pump control modes, Pump Down (empty a tank) and Pump Up (fill a tank) (see table below). When in the Pump Down mode and both inputs detect liquid, the unit energizes the relay and keeps it energized until the level drops to the point where the OFF input no longer detects liquid. When in the Pump Up mode and both inputs detect no liquid, the unit energizes the relay and keeps it energized until the level rises to where the OFF input detects liquid. The Sensitivity of the unit must be set for the type of liquid being detected (see Dip Switch table below). The unit provides a 10 second power up delay to prevent a pump from being turned on too soon after a power interruption. An adjustable ON Delay is provided for use as a lag pump delay.

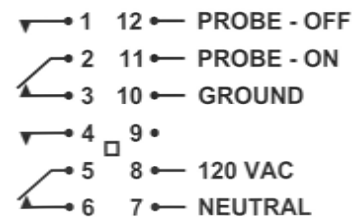
The adjustable OFF Delay is provided so that the unit may be used to provide timed off, backup pump control. (See the Dip Switch table for the ON and OFF delay settings).

|   |             |                         |       |                     |        |
|---|-------------|-------------------------|-------|---------------------|--------|
| 1 | SENSITIVITY | OFF — TYPICAL SEWAGE    |       | ON — LIGHT SEWAGE   |        |
|   |             | OFF                     |       | OFF                 |        |
| 2 |             |                         |       |                     |        |
| 3 | PUMP MODE   | OFF — PUMP DOWN (EMPTY) |       | ON — PUMP UP (FILL) |        |
| 4 | ON DELAY    | OFF                     | ON    | OFF                 | ON     |
|   |             | 1 SEC                   | 5 SEC | 10 SEC              | 15 SEC |
| 5 |             | OFF                     | OFF   | ON                  | ON     |
|   |             | OFF                     | OFF   | ON                  | ON     |
| 6 | OFF DELAY   | OFF                     | ON    | OFF                 | ON     |
|   |             | 1 SEC                   | 5 SEC | 30 SEC              | 60 SEC |
| 7 |             | OFF                     | OFF   | ON                  | ON     |
|   |             | OFF                     | OFF   | ON                  | ON     |



## SPECIFICATIONS

Input Power: 120 VAC ± 10%, 3.8 VA max  
 Relay Type: DPDT  
 Output Rating: 5 A Resistive @ 240 VAC  
 5 A Inductive @ 240 VAC  
 Sensor Output Voltage: ±12 V Square Wave  
 Sensor Output Current: ±1.2 mA max (per sensor)  
 Operating Temp: -40°C to +60°C  
 Storage Temp: -45°C to +85°C  
 Enclosure: White Lexan  
 Base: Phenolic



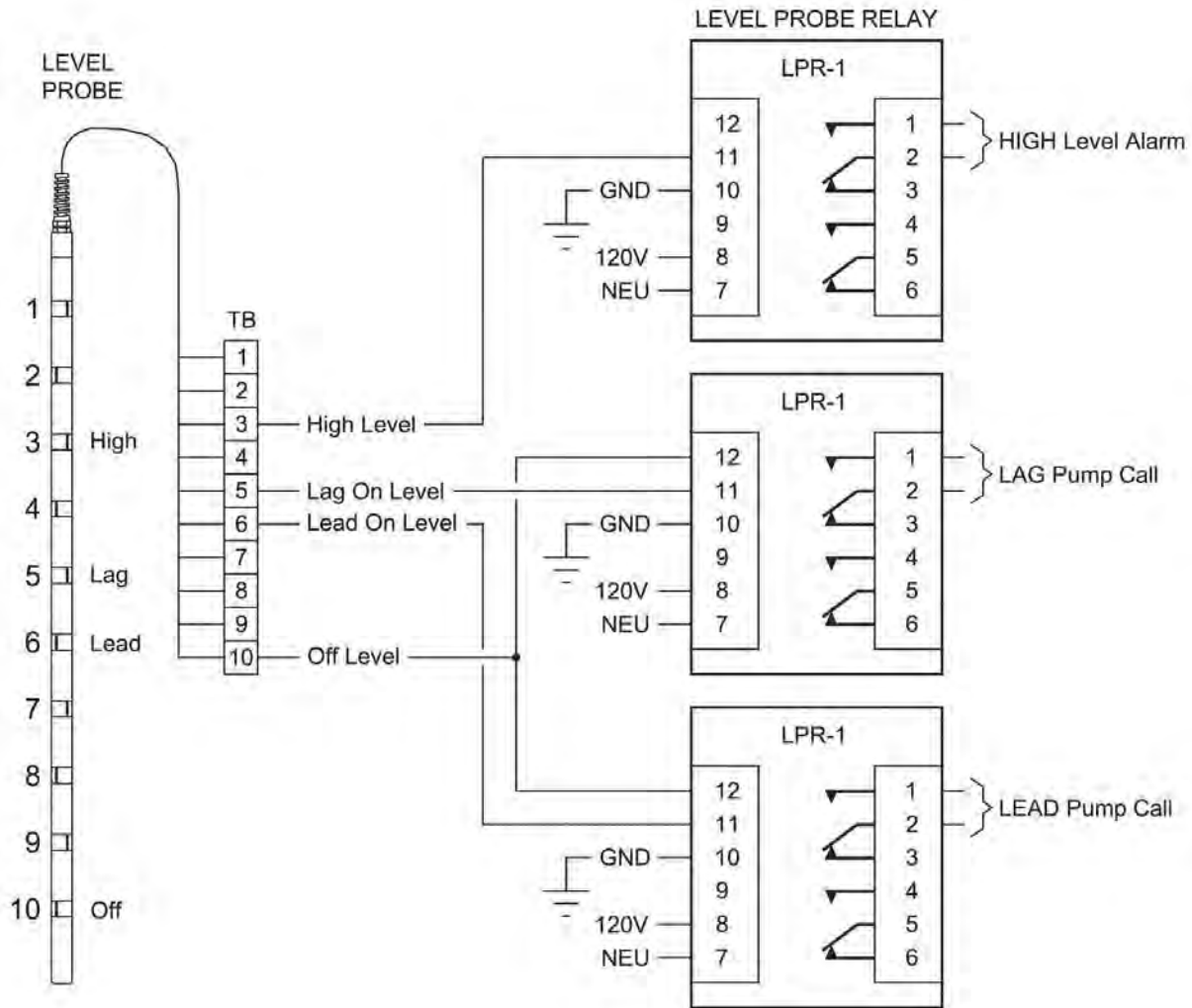
## ORDERING INFORMATION

Part Number: LPR-1

# LEVEL PROBE RELAY

## APPLICATION EXAMPLE

The following is an example of how to connect three LEVEL PROBE RELAYs to a LEVEL PROBE, to provide a High Level Alarm and Lead & Lag Pump Call outputs for a typical duplex pump down application:



### Notes:

1. The liquid in the wet well must be grounded to the control panel ground. Where a submersible pump is present, the grounded housing of the pump will provide the required ground connection. If there is no ground connection, a single point Level Probe may be placed near the bottom of the wet well and connected to the control panel ground.
2. The High Alarm, Lead On, Lag On and Off Levels are set by selecting the appropriate terminals on the terminal strip (TB), as shown above.
3. A Lag Pump Delay may be accomplished by setting 5, 10, or 15 seconds on DIP Switches 4 & 5 on the Lag Pump Call Level Probe Relay.