LS-2600 Leak Sensors

Sump Alarm
www.SumpAlarm.Com™

Level Sense LS2600 Surface Liquid Sensor connects to a control device accepting an analog or digital input.

- Size: L64*W15.6*H12.7mm
- Housing: ABS, white
- Working Voltage: 5Vdc-12Vdc
- Max. Voltage: 24Vdc
- Max. Working Current: 0.5 Amp
- Temperature: 14°F +150°F / (-10℃ +65℃)
- 6 Feet of Cable
- Red wire to Positive, white wire to Negative (ground)
- Perfect for Arduio, Rasberry Pi, and home electronics projects.

If you are using this in home electronics projects, please take note of the following:

- This device is not providing a "contact closure" it is providing a trickle current between the two contacts when water with some ionic content is present.
- The Leak sensor behaves as an open circuit when no water is present, and behaves as a (roughly) 1.4MΩ resistor when water is present. The resistance of it *depends on your water.*
- To confirm if the device is working, place the ohmmeter probes directly into water approximately 1.5" inches apart and take a reading. Then place the sensor in water and connect the ohmmeter to the red and white wires. The two readings should be similar.
- To get the best circuit design, put the sensor feet in water and measure the resistance with an ohmmeter. Use this resistance in your circuit design.
- In the unlikely event you have "non-conductive" water, it can be easily rectified by sprinkling some salt around the sensor location. The water will absorb the salt, the salt will ionize the water, and allow it to conduct.
- If you are using this sensor as an input to an Arduino or raspberry Pi, it is recommended to use either an Analog input, or a "PULL UP" input where the sensor is taking an input to ground.
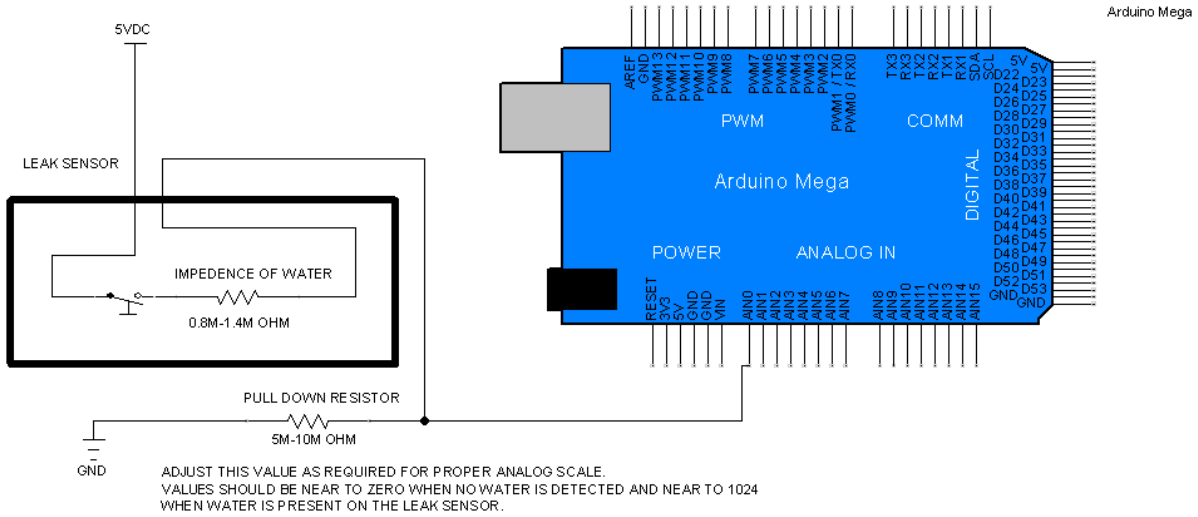
Application	Red Wire Connection	White Wire Connection
Arduino / RP Analog Input	+5VDC	Input, with 5MΩ Pull Down Resistor
Arduino Discrete Input (pinmode=PULL UP)	Input	Ground
Solid State Relay **Control** (with 3-32VDC Coil) and 12-24VDC+ Power Source	Coil -	Ground
Control a mechanical relay or contactor	DC Source	Transistor Base going into a "Darlington Pair"

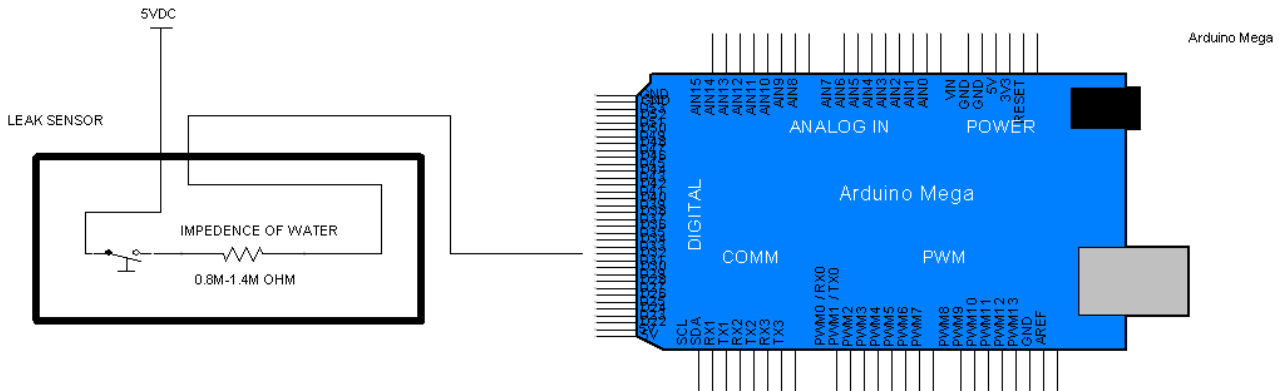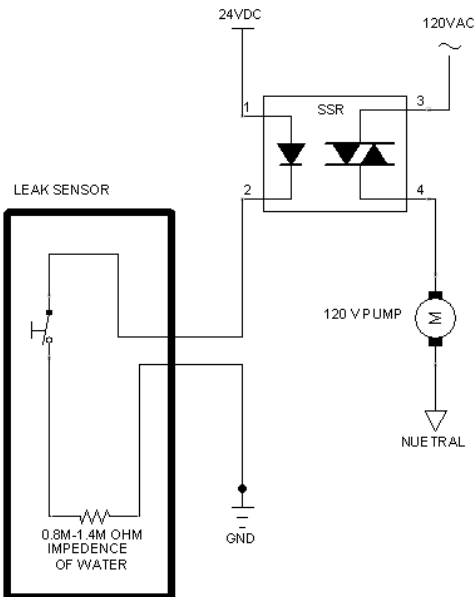**For help or assistance, call our support line at 314-787-8059 ext 2.**

LS-2600 Leak Sensors
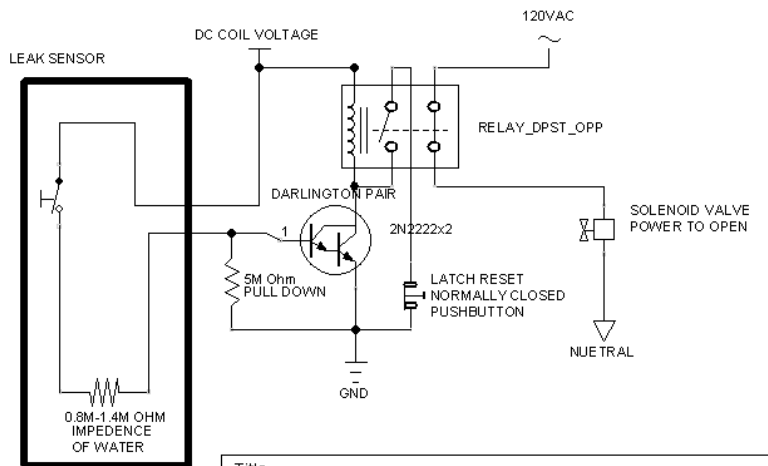
SumpAlarm

LS-2600 WITH MICROCONTROLLER ANALOG INPUT

5VDC

LEAK SENSOR

IMPEDENCE OF WATER

0.8M-1.4M OHM

Arduino Mega

PULL DOWN RESISTOR

5M-10M OHM

GND

ADJUST THIS VALUE AS REQUIRED FOR PROPER ANALOG SCALE.
VALUES SHOULD BE NEAR TO ZERO WHEN NO WATER IS DETECTED AND NEAR TO 1024
WHEN WATER IS PRESENT ON THE LEAK SENSOR.

LS-2600 WITH MICROCONTROLLER DIGITAL *PULL UP* INPUT

5VDC

LEAK SENSOR

IMPEDENCE OF WATER

0.8M-1.4M OHM

Arduino Mega

ACTIVATING SOLID STATE RELAY WITH THE LS-2600 TO POWER A 120VAC PUMP (OR SOLENOID)

24VDC

120VAC

SSR

LEAK SENSOR

120 V PUMP

NUETRAL

GND

0.8M-1.4M OHM
IMPEDENCE
OF WATER

ACTIVATING A MECHANICAL RELAY WITH THE LS-2600 TO POWER A 120VAC SOLENOID (OR PUMP) CIRCUIT LATCHES ON WATER CONTACT

LEAK SENSOR

DC COIL VOLTAGE

120VAC

RELAY_DPST_OPP

DARLINGTON PAIR

2N2222x2

5M Ohm
PULL DOWN

LATCH RESET
NORMALLY CLOSED
PUSHBUTTON

SOLENOID VALVE
POWER TO OPEN

NUETRAL

GND

0.8M-1.4M OHM
IMPEDENCE
OF WATER

Title		
LS-2600 EXAMPLE CIRUITS		
Author		
LEVEL SENSE BY SUMPALARM		
SUMP ALARM		
File		Document
S:\TechnicalData\Lev ... ls-2600 circuits.dsn		LS-2600
Revision	Date	Sheets
1.0	02/19/2018	1 of 1