

Intrinsically Safe Floor Water Sensor

NO Circuit Configuration - Zero Current - Immersion Type

EXP-EL-SR-IS-WS-FM Floor Water Sensor connects to a control device accepting an analog or digital input.

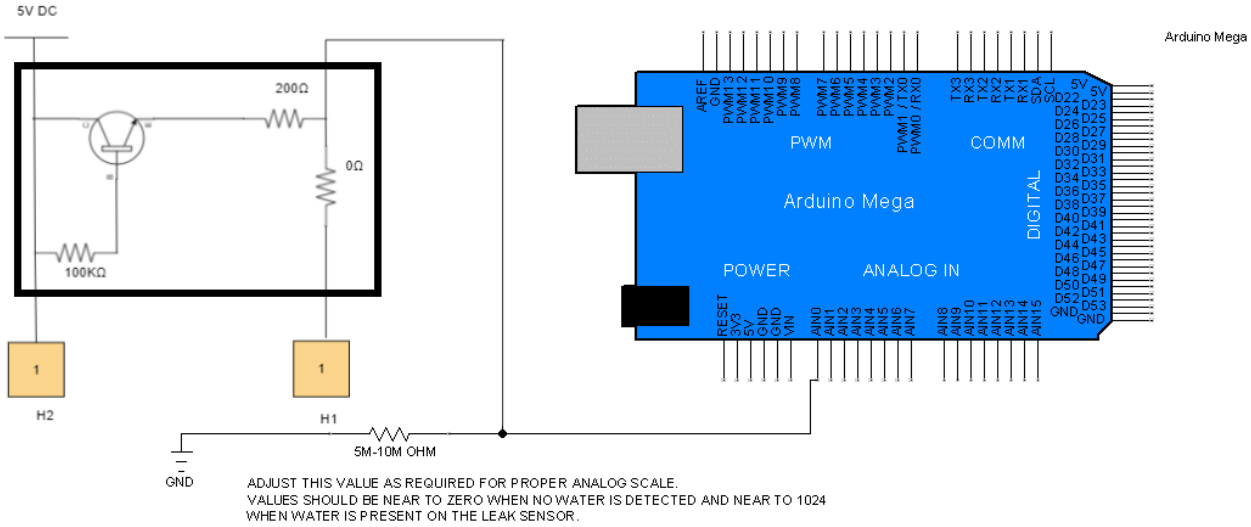
- Size: L64*W15.6*H12.7mm
- Housing: ABS, white
- Working Voltage: 5Vdc-24Vdc
- Max. Voltage: 24Vdc
- Max. Working Current: 0.5 Amp
- Temperature: 14°F +150°F / (-10°C +65°C)
- Black wire to Positive, Red wire to Negative (ground)
- Perfect for Arduino, Raspberry Pi, and home electronics projects.

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

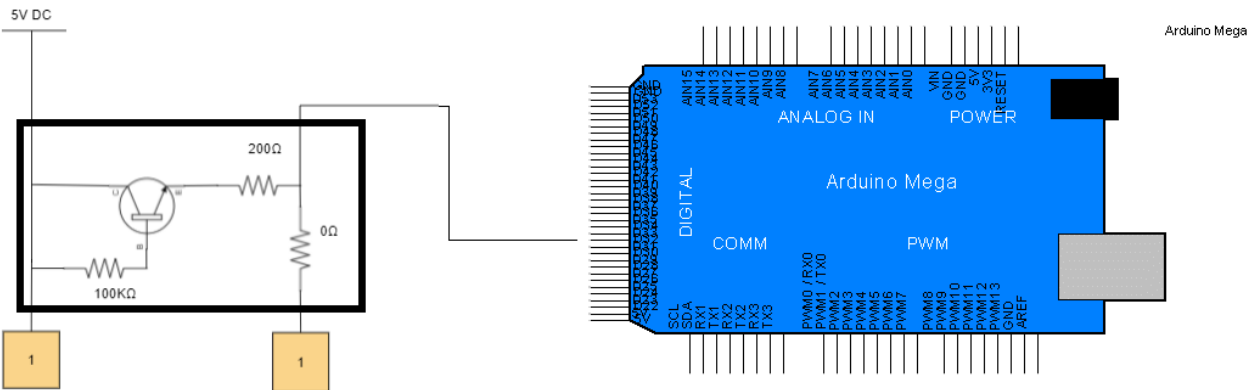
- This device is not providing a “contact closure” it is providing a trickle current between the two contacts when water with some ionic content is present.
- The Leak sensor behaves as an open circuit when no water is present, and behaves as a (roughly) 1.4MΩ resistor when water is present. The resistance 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	Black 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

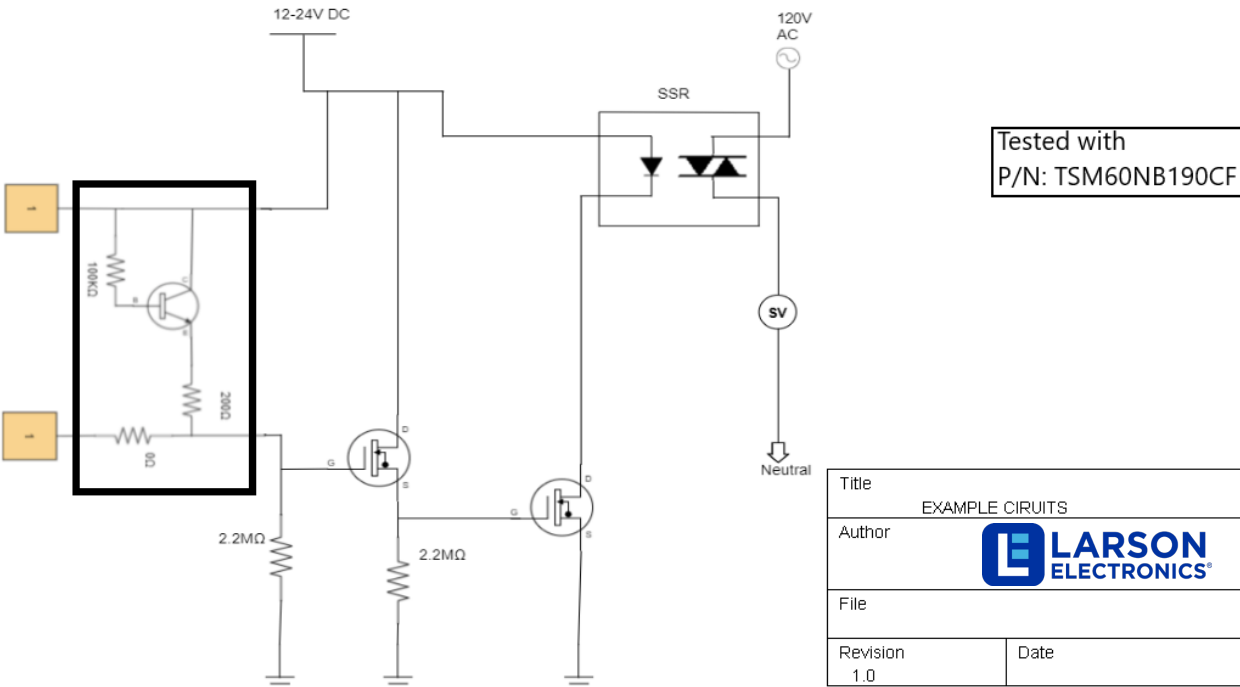
WITH MICROCONTROLLER ANALOG INPUT



WITH MICROCONTROLLER DIGITAL INPUT



ACTIVATING SOLID STATE RELAY TO POWER A 120VAC PUMP (OR SOLENOID)



Title EXAMPLE CIRCUITS		
Author LARSON ELECTRONICS®		
File	Document	
Revision 1.0	Date	Sheets 1 of 1