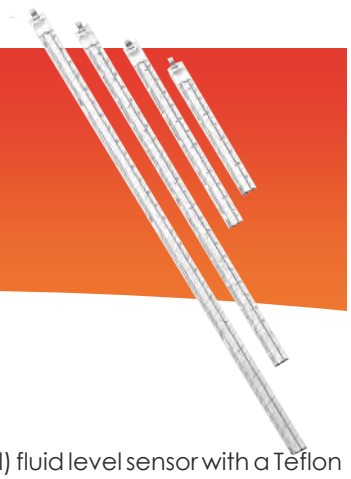
Chemical Fluid Level Sensor
JLS-C Series



Description

The JLS-C Series chemical sensor is a solid state, continuous (multi-level) fluid level sensor with a Teflon (FEP) jacket that is rated for use in chemical, petroleum and food safe applications. The JLS-C Series sensor is manufactured using printed electronic technologies which employ additive direct printing processes to produce functional circuits.

Theory of Operation

The JLS-C Series sensor's envelope is compressed by hydrostatic pressure of the fluid in which it is immersed resulting in a change in resistance which corresponds to the distance from the top of the sensor to the fluid surface. The JLS-C Series sensor provides a resistive output that is inversely proportional to the level of the liquid: the lower the liquid level, the higher the output resistance; the higher the liquid level, the lower the output resistance.

Specifications

Model	JLS-C8	JLS-C12	JLS-C24	JLS-C32
Nominal Length	**8-inch**	**12-inch**	**24-inch**	**32-inch**
Sensor Length	10.2" (259 mm)	14.2" (361 mm)	26.0" (660 mm)	34.2" (869 mm)
Active Length	8.4" (213 mm)	12.4" (315 mm)	24.34" (618 mm)	32.4" (823 mm)
Sensor Output	400-1500Ω ±20%	400-2000Ω ±20%	400-4000Ω ±20%	400-5000Ω ±20%
Ref Resistance	1500Ω ±20%	2000Ω ±20%	4000Ω ±20%	5000Ω ±20%

Thickness: 0.015" (0.381mm)

Width: 1.0" (25.4 mm)

Actuation Depth: Nominal 1" (25.4 mm)

Resolution: < 0.01"(0.25 mm)

Resistance Gradient: 150Ω /inch (60Ω/cm)

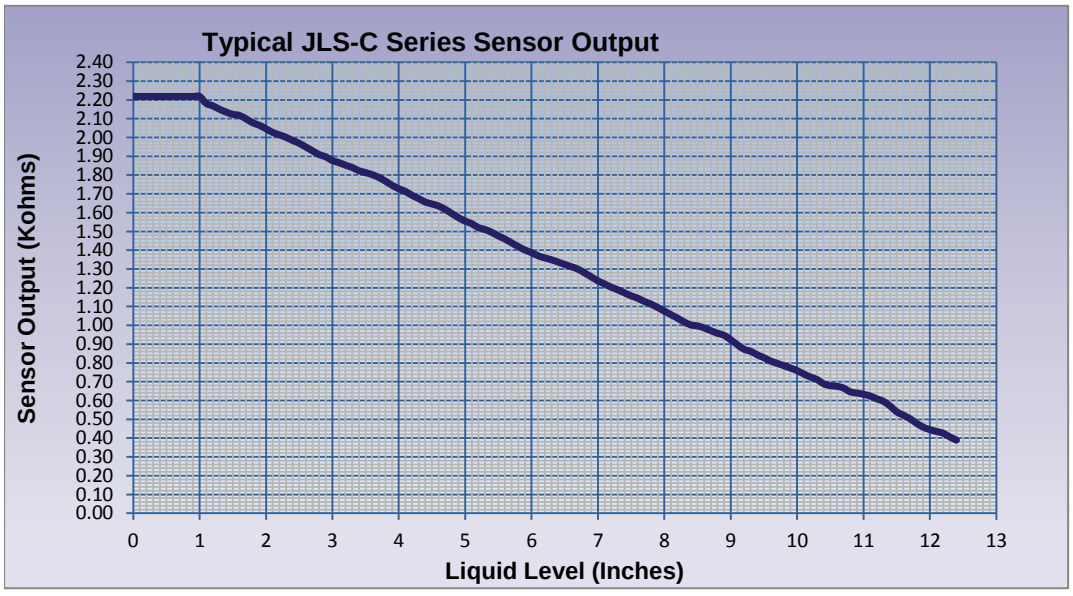
Connector: Male Crimpflex Pins

Power Rating: 0.5 Watts (VMax = 10V)

Temperature Range: 15°F - 150°F (-9°C - 65°C)

Sensor Output

The JLS-C Series can be modeled as a variable resistor. The typical output characteristics of the JLS-C Series sensor are show in the figure below:



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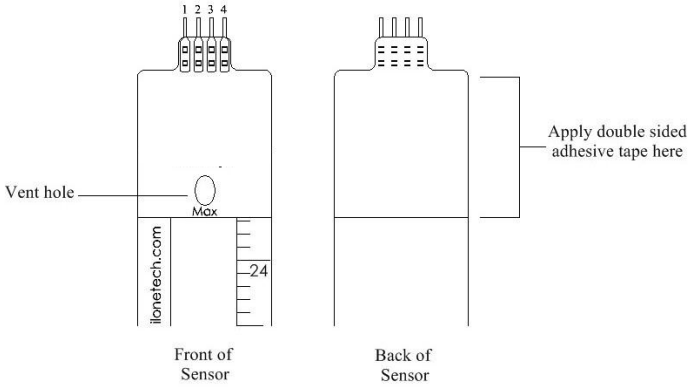
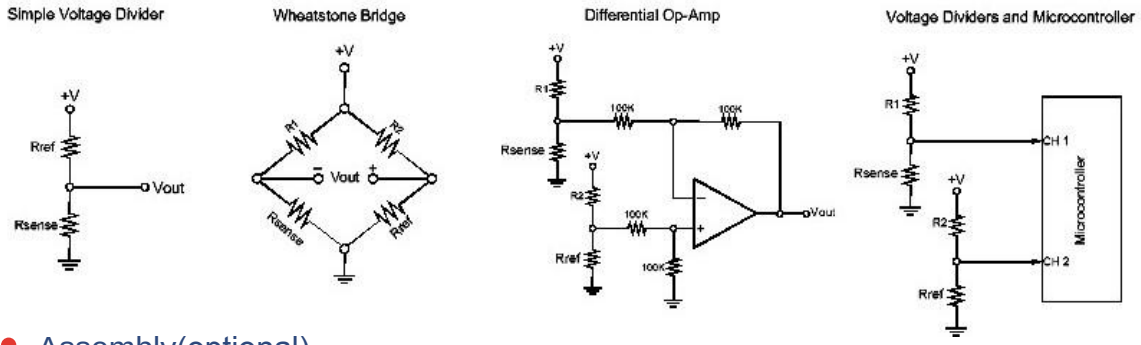
Connection and Installation

Connect to the JLS-C Series by attaching a 4 pin connector with pre-soldered wires to the Crimpflex pins. Do not solder directly to the Crimpflex pins. The inner two pins (pins 2 and 3) are the sensor output (Rsense). The outer pins (pins 1 and 4) are the reference resistor (Rref) which can be used for temperature compensation. Suspend the JLS-C Series sensor in the fluid to be measured. To work properly the sensor must remain straight and must not be bent vertically or longitudinally. For best results install the sensor inside a section of 1-inch diameter PVC pipe. Double sided adhesive tape may be applied to the upper back portion of the sensor to suspend the sensor in the container to be measured. However, the liquid must be allowed to interact freely with both sides of the sensor. The vent hole located above the max line allows the JLS-C Series to equilibrate with atmospheric pressure. The vent hole is fitted with a oleophobic filter membrane to prevent the JLS-C Series from being swamped if inadvertently submerged.



Sample Circuits



Assembly(optional)

The Chemical Fluid Level Sensor is equipped with a Teflon (FEP) jacket and is rated for used in chemical, petroleum, and food-safe applications.

Our Chemical Fluid Level Sensor is fully assembled in a clear, elliptical polycarbonate tube to protect and stabilize the sensor. It is stocked in 5-inch, 8-inch, 12-inch, 24-inch, and 32-inch sizes.

Available with a standard voltage divider output or optional 0-5V output.

If you have an application that requires a custom length, configuration, or output characteristics to fit a particular application, please contact us.