



## Description

This universal vibrating level switch is an ideal instrument for accurate point level detection in liquids. Using vibrating fork technology, this device will detect the change in its natural resonant frequency (1.100 Hz) which is driven by an internal piezoceramic element inside the sensor. The frequency will change when the sensor is covered to a known point on the vibrating fork upon which the sensor will send a switching output. If the vibrating fork is not covered by liquid, its natural resonant frequency changes back and so does the state of the switching output. Typical applications include washing, filling, cooling and lubricating systems, sump level and bulk holding tank level control.

## Features & Benefits

- Simple, compact design
- Extremely reliable
- Setup without adjustment or calibration
- Independent of liquid properties and installation conditions
- No moving parts, thus wear and maintenance free
- External test option using test magnet
- Suitable for temperatures up to 150° C (302° F)

## Specifications

Electrical Data	
<b>Switching Output Type</b>	Transistor (For connection to binary inputs of a PLC with an input resistance <100kΩ)
<b>Supply Voltage</b>	10 to 31 VDC
<b>Load Current Max.</b>	250mA (output is overload and permanently short-circuit protected)
<b>Off-State Current (Load Off)</b>	< 10uA
<b>Voltage Drop</b>	< 1V
<b>Power Consumption Max</b>	.825W
<b>Protection Class</b>	IP66/67
<b>Over-voltage Category</b>	III
<b>Connection Plug</b>	M12x1, 4-Pin (See order code for adding the mating - M12 cable)
Measurement Performance (Reference Condition: Density .7g/cm <sup>3</sup> )	
<b>Hysteresis</b>	0.08in (2mm) 3mm +/- 5mm
<b>Switching Point (Nominal)</b>	Vertical Installation: 0.51in (13mm) above tip of fork ( <i>indicated by a small notch on the outside of the fork paddles</i> ) Horizontal Installation: Center axis of the fork paddle ( <i>indicated by an elongated ridge on the outside of the fork paddles</i> ) Switching point is in any liquid definitely located on the fork paddle area
<b>Switching Delay</b>	On: 0.5s / Off: 0.5s
Application Conditions	
<b>Dielectric Constant [ε<sub>r</sub>]</b>	No restriction (Suitable for all oils, ie: cutting, grinding and hydraulics oil; coolant; erosion dielectric fluid; cleaning and degreasing agents; solvents; all liquid lubricants; water and water-based liquids)

<b>Conductivity</b>	No restrictions
<b>Density</b>	0.025 to 0.9lbs/in <sup>3</sup> (0.7 to 2.5g/cm <sup>3</sup> ) (Not suitable for substances with very low density, ie. propane)
<b>Dynamic Viscosity</b>	0.1 to 10,000cP (0.1 to 10.000mPa s) (Not suitable for very viscous or adhesive substances)
<b>Solid Content in the Liquid</b>	Max. 0.2in (5mm) diameter of solid particles contained in the liquid can be used in slurries
<b>Foam/Air Bubbles</b>	Insensitive to foam and air bubbles
<b>Build-up</b>	Avoid situations where a substance coats and dries on the fork, thus creating excessive build-up/caking on the fork or even bridge the fork (ie. dense paper slurries, bitumen)
<b>Application Temperature</b>	F: -40° to + 212° or -40° to + 302° C: -40° to + 100° or -40° to +150°
<b>Ambient Temperature</b>	F: -40° to 158° C: -40° to 70°
<b>Temperature Shock</b>	No restrictions
<b>Application Pressure</b>	-14.5 to 580 PSI (-1 to 40 Bar)
Mechanical Data	
<b>Ingress Protection Rating</b>	M12x 1 plug: IP66/IP67
<b>Connection Size</b>	3/4" or 1/2"
<b>Thread Type</b>	NPT (US) or G (Metric)
<b>Surface Finish [Ra]</b>	1.26in <sup>-4</sup> (<3.2um)
<b>Material All Metal Parts</b>	1.4404 (316L)
<b>Other Materials</b>	Flat seal: Klingersil C -4400, Plastic End Cap: PEI

Note: Please Consult Factory for Special Requirements

# Ordering Information

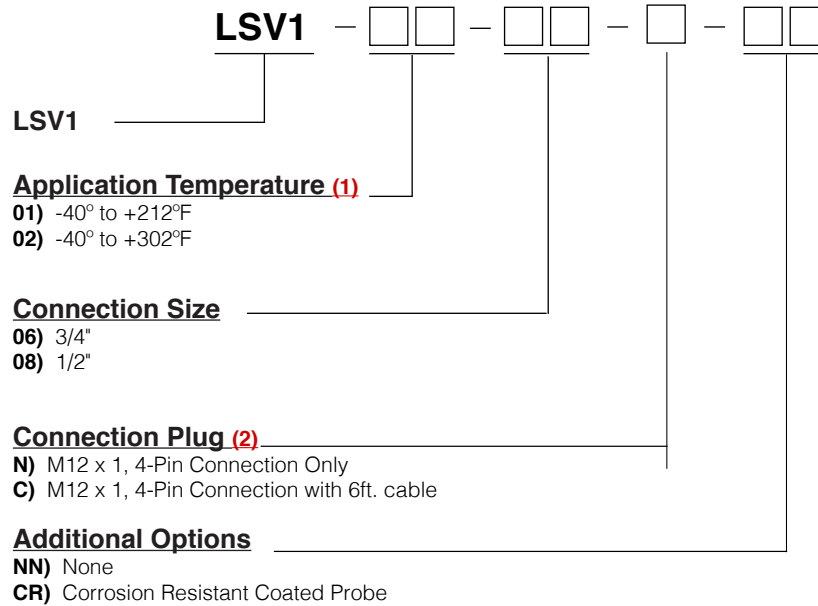
## FLO-CORP MODEL NUMBER BUILDER

For Assistance Call (877) 356-5463

Use the diagram below, working from left to right to construct your FLO-CORP Model Number.  
Simply match the category number to the corresponding box number.

**Example: LSV1-01-06-N-CR**

*Vibex™ Vibrating Level Switch, -40° to +212°F Application Temperature, 3/4" Connection, M12 x 1, 4-Pin Connection Only with a Corrosion Resistant Probe*



**Ordering Notes:**

- (1) Select the best configuration based on your requirements
- (2) Standard M12 cable is required for operation. For special lengths, please contact factory.

*Specifications are subject to change without notice.*