

**SuperSwitch™ Ultrasonic
Sensing Technology**

Model LL-1X

IDEAL FOR:

- ◆ Pump Protection
- ◆ Storage Tanks
- ◆ Compressors
- ◆ Hydraulic Supply Lines
- ◆ Boiler Water Cutoff
- ◆ Sewage Systems
- ◆ Pipe Lines
- ◆ Various OEM Applications

ADVANTAGES

500:1 wet to dry ratio

All wetted parts TEFZEL™ or 316 SS

Sealed integral electronics

**Intrinsically safe model LL-10 (316 SS)
(when used with intrinsic safety barrier)**

Low cost replacement to all other switches

Large OEM discounts available



The SuperSwitch™ LL-1X Series Point Level Switch is the IDEAL direct replacement for mechanical float liquid level switches. It utilizes field proven ultrasonic technology and solid state integral electronics.

The **HiTECH** SuperSwitch™ provides very reliable performance in virtually any liquid, regardless of the viscosity. The all solid state sensing technology eliminates failure problems due to finite mechanical life inherent in the mechanical float design.

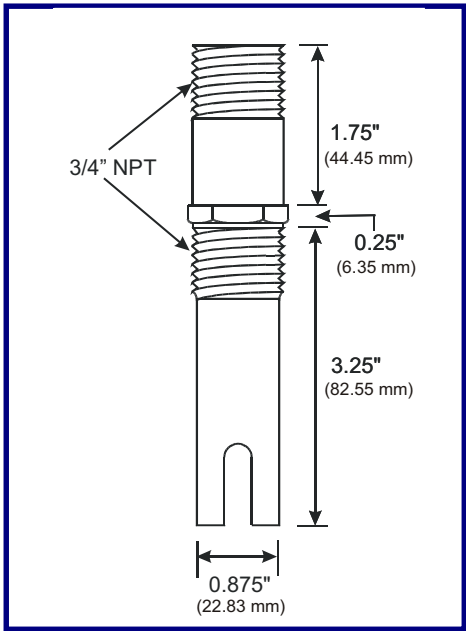
With totally sealed electronics, the SuperSwitch™ is designed to provide many years of maintenance-free service.

The LL-1X Series offers a variety of outputs and is available in a range of materials to meet a wide spectrum of difficult applications.



SPECIFICATIONS

| <p>Type Ultrasonic Sensing Technology point level switch</p> | <p>Outputs</p> <table border="1"> <thead> <tr> <th>Model</th> <th>Type/Spec</th> </tr> </thead> <tbody> <tr> <td>LL-10</td> <td>Two wire output 4.0± 1.0 ma dry 16.0± 1.0 ma wet</td> </tr> <tr> <td>LL-11</td> <td>Relay output, one amp (dry contact N.O orN.C.)</td> </tr> <tr> <td>LL-13</td> <td>NPN (250 ma, sink)</td> </tr> </tbody> </table> | Model | Type/Spec | LL-10 | Two wire output 4.0± 1.0 ma dry 16.0± 1.0 ma wet | LL-11 | Relay output, one amp (dry contact N.O orN.C.) | LL-13 | NPN (250 ma, sink) | <p>Sensor 316 SS or TEFZEL™ Standard Other materials available</p> |
|---|--|---|-----------|-------|--|-------|---|-------|--------------------|---|
| Model | Type/Spec | | | | | | | | | |
| LL-10 | Two wire output 4.0± 1.0 ma dry 16.0± 1.0 ma wet | | | | | | | | | |
| LL-11 | Relay output, one amp (dry contact N.O orN.C.) | | | | | | | | | |
| LL-13 | NPN (250 ma, sink) | | | | | | | | | |
| <p>Operating Point Repeatability 2mm or better</p> | | <p>Mounting 3/4" NPT Standard</p> | | | | | | | | |
| <p>Delay 0.5 seconds</p> | | <p>Cable Length 12 inches Standard Other lengths available</p> | | | | | | | | |
| <p>Input Power 9 VDC to 30 VDC</p> | | <p>Temperature -20 °F to +160 °F</p> | | | | | | | | |
| <p>Leakage Current Less than 50 micro-amps</p> | <p>Protection Transient, reverse polarity.</p> | <p>Pressure Up to 1000 psig</p> | | | | | | | | |



PERFORMANCE GUARANTEE

Since 1986, every instrument sold by **HITECH** has been guaranteed to perform in the application it originally was engineered and recommended for. Our company policy remains the same, every product sold comes with a **written performance guarantee**.

Should the equipment be unable to perform satisfactorily in your application and we are not able to correct the problem, we will accept the instrument in return and issue full credit.

This performance guarantee is valid for 60 days. Thereafter, our standard limited two years factory warranty goes into effect.