

## ULS-10 Series and ULS-100 Series

### High Performance Models with Explosion-Proof Housings

- ▶ 10 Amp Relay Output
- ▶ 115/230 VAC 12 VDC or 24 VDC Input
- ▶ High Gain
- ▶ No Calibration Necessary
- ▶ Temperatures to 300°F (149°C)
- ▶ Lengths to 99 inches (251.5 cm)

The ULS-100 Series features our high performance sensor probe for handling liquid temperature to 300°F (149°C) and pressure to 1000 psi. Explosion-proof and water-tight, cast aluminum enclosures are standard; FM Approved explosion-proof enclosures are also available.

The ULS-10 Series features a Tip Gap probe design for closer tank bottom access. The miniaturized, encapsulated electronic control unit may be supplied for remote mounting, or directly mounted on sensor in an explosion-proof, NEMA enclosure. FM-Approved, explosion-proof enclosures are also available.

### Specifications

<b>Input Power</b>	115/230 VAC, 50/60 Hz; or 12/24 VDC
<b>Gain</b>	
<b>ULS-10 Series</b>	500:1
<b>ULS-100 Series</b>	1000:1
<b>Output</b>	
<b>ULS-10 Series</b>	10 Amp DPDT Relay, or 2-Wire, 4mA-Dry, 20mA-Wet (9-36 VDC)
<b>ULS-100 Series</b>	10 Amp DPDT Relay
<b>Delay (On)</b>	0.5 Seconds
<b>Repeatability</b>	2mm, Typical
<b>Housing</b>	NEMA 4/NEMA 7 Watertight, Explosion Proof Enclosure, Epoxy Coated Cast Aluminum Class I, Group C & D; Class II, Group E, F, & G; and Class III, Division 1 & 2.
<b>Operating Temperature</b>	
<b>Sensor</b>	
<b>ULS-10 Series</b>	-40°F to +300°F (-40°C to +149°C)
<b>ULS-100 Series</b>	-40°F to +300°F (-40°C to +149°C)
<b>Electronics</b>	-20°F to +170°F (-29°C to 77°C)
<b>Pressure, PSIG, Max.</b>	1000 @ 250°F

**ORDER IT!**  
Ordering is Easy! See Page A-42.  
Easy online ordering too!



**ULS-100 Series**  
FM-Approved Explosion-Proof Enclosure may be ordered by specifying ULS-100-EP.



**ULS-10 Series**  
Will sense liquid to within 1/4" of tank bottom.

### Remote Electronics Configurations



**ULS-100**  
Sensor Probe

**ULS-10**  
Sensor Probe

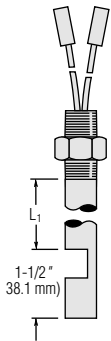
Remote Electronics

1. Mounting Type\*

Integral Electronics 3/4" NPT		Remote Electronics 3/4" NPT	
ULS-100 Series	ULS-10 Series	ULS-100 Series	ULS-10 Series
<b>Mounting and Sensor Materials</b>		316 Stainless Steel (Standard) Consult Factory For Other Materials.	

\*Flanges also available; consult factory for sizes and materials.

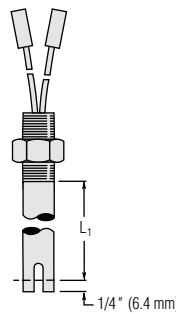
2. Actuation Level Dimensions



**ULS-100 Series**

Switch actuation level ( $L_1$ ) is determined following the guidelines below.

$L_1 = 1'' (25.4 \text{ mm})$   
 Minimum  
 99'' (251.5 cm)  
 Maximum\*



**ULS-10 Series**

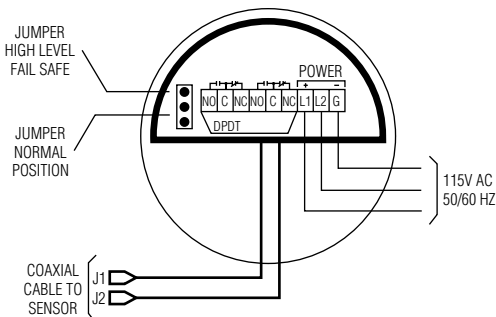
Switch actuation level ( $L_1$ ) is determined following the guidelines below.

$L_1 = 2-1/4'' (57.2 \text{ mm})$   
 Minimum  
 99'' (251.5 cm)  
 Maximum\*

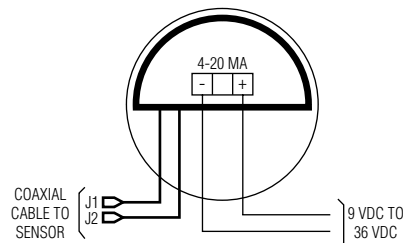
\*Consult factory for longer lengths.

Wiring Diagrams

DPDT – ULS-10 and ULS-100 Series



4-20mA – ULS-10 Series only



Note:  
 For 24 VDC or 12 VDC Models  
 Connect Positive (+) to L1-Terminal  
 Connect GND (-) to G - Terminal

<p><b>FAX IT!</b> <b>860-747-4244</b></p> <p><b>Photocopy This Form</b> Use one form for each product type you are selecting.</p>	<p>This is a <input type="checkbox"/> Request for a Quote <input type="checkbox"/> Order P.O.# _____</p> <p>Quantity Needed _____</p> <p>Date Required ____/____/____</p> <p>Shipping Method: _____</p> <p>Partials Accepted: <input type="checkbox"/> Yes <input type="checkbox"/> No</p>	<p>Name _____</p> <p>Company _____</p> <p>Street _____</p> <p>City _____ State ____ Zip _____</p> <p>Phone (____) _____</p> <p>Fax (____) _____</p>
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## Ultrasonic Level Switches

### Application Environmental Conditions

This information is essential to the accurate and proper operation of your GEMS configurable sensors. Please complete fully and accurately.

- |  |   |
|--|---|
| <p><b>1. Liquid Media:</b> _____</p> <p><b>2. Pressure:</b> Minimum _____ psig Maximum _____ psig</p> <p><b>3. Temperature:</b> Minimum _____ °F Maximum _____ °F</p> <p><b>4. Specific Gravity:</b> Minimum _____ Maximum _____</p> | <p><b>5. Viscosity:</b> _____ SSU</p> <p><b>6. Tank Material:</b> _____</p> <p><b>Tank Depth:</b> _____</p> <p><b>7. Unit is Mounted In:</b> <input type="checkbox"/> Tank Top <input type="checkbox"/> Tank Bottom</p> |
|--|---|

- 1. Series (Page Number):**  
 ULS-11 (A-39)     ULS-10 (A-40)     ULS-100 (A-40)

- 2. Input Power:**  
 ULS-10, ULS-100:  
 115 VAC     230 VAC     12 VDC     24 VDC
- ULS-11:  
 9 to 36 VDC

- 3. Output (Check One Box Only):**  
 ULS-11:     SPDT
- ULS-10:     DPDT             2-Wire, 4mA (Dry), 20mA (Wet)
- ULS-100:     DPDT

- 4. Mounting Type:**  
 ULS-11:     Type 1
- ULS-10, ULS-100:  
 Integral Electronics:  
                    NEMA 4 Enclosure:     NEMA 7 Enclosure:  
 Remote Electronics: Sensor Cable Length \_\_\_\_\_ inches

Please specify any non-standard material request here:

\_\_\_\_\_

\_\_\_\_\_

Standard sensor material is 316 Stainless Steel. See Table on Page A-36 for alternate materials available.

### 5. Actuation Level Dimension:

Actuation Level	Distance to Actuation Level – Inches*	Range		
		Series	Min.	Max.
L1		ULS-11	2-1/4"	99"
		ULS-10	2-1/4"	120"
		ULS-100	1"	120"

\* Measure from bottom of mounting threads.

Please contact GEMS Sensors Inc. for any configuration or special requirements not covered on this form. **800-378-1600**

Quote \$ \_\_\_\_\_ Date Quoted \_\_\_\_/\_\_\_\_/\_\_\_\_



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