

# U00XE SERIES

## ULTRASONIC GAP SWITCH FOR HAZARDOUS LOCATIONS

### DESCRIPTION

The U00XE Series Solid-State Level Switches are reliable, low-cost liquid level controls for use in hazardous locations. U00XE models are compatible with many liquids, regardless of the fluid's density or conductivity. The units require no calibration, withstand pressures up to 2,000 PSIG and their compact, 7/8" diameter probes install in any orientation. U00XE models are constructed from durable and easy-to-clean 316 stainless steel with probe lengths available up to 100". Optional material: Hastelloy C.

### PRINCIPLE OF OPERATION

An ultrasonic transmitter and receiver detect the presence of fluid between two piezoelectric crystals sealed within the sensing gap. As the gap fills with liquid, an ultrasonic wave signal passes between the crystals and either results in an output shift from 8 mA to 16 mA (U002E), or activates a relay (U003E & U004E).

### KEY FEATURES

- No Moving Parts: Pulsed 2 MHz Ultrasonic Signal
- Horizontal or Vertical Orientation
- Compact 7/8" Diameter Probe
- No Calibration Required
- FM-Approved: Class I, Div 1, Groups C & D; Class II/III Groups E, F & G
- Easy Two-Wire Output Installation & Intrinsically-Safe When Connected With Barrier (U002E)
- "Fail-Safe" Mode Available (U004E)

### ENVIRONMENTAL

- Process Temperature:  
-40° to +185° F (-40° to +85° C)
- Process Pressure:  
**316 Stainless Steel:** 2,000 PSIG (137.9 bar)  
**Hastelloy C:** 2,000 PSIG (137.9 bar)





### SPECIFICATIONS

MODEL	INPUT	OUTPUT
U002E	12 to 35 VDC	Current Shift; 8 mA (Dry Sensor Tip), 16 mA (Wet Sensor Tip)
U003E	12 to 35 VDC	SPDT Relay; 1 Amp @ 30 VDC, 0.5 Amp @ 125 VDC/150 VAC
U004E	24 to 30 VDC	SPDT Relay; 1 Amp @ 30 VDC, 0.5 Amp @ 125 VDC/150 VAC

### ELECTRICAL

- Input: See Chart Below
- Output: See Chart Below
- Response Time: < 1/2 Second
- Crystal Frequency: 2 MHz
- Power Consumption: 1 Watt (Max.)
- Vibration Class: ANSI/ISA-S71.03 Class VC2
- Shock Class: ANSI/ISA-S71.03 Class SA1
- Ingress Protection: NEMA 4 X (IP66)

### APPLICATIONS

-  Pump Control & Protection
-  Fill-Line Monitoring
-  Level Monitoring
-  Leak Detection



U00XE

### DIMENSIONS

