

# SafeSonic™ 25-L Level Transmitter

## Loop Powered Sensor for Class I Division 1 Hazardous Areas

SAFE Series

**SAFE** sensors are designed for level or distance measurements in areas where ignitable concentrations of flammable gases, vapors or liquids are likely to exist under normal operating conditions.

They offer resistance to most chemicals depending on the installation. The PVDF (Kynar®) construction of the lower body offers superior resistance when installed in a sealed tank using the 2-in NPT threaded mount.

SafeSonic sensors transmit measurements to process control systems using a conventional 2-wire 4-20 mA current loop.



25-ft. (7.6 m) maximum range in IP65 rated housing



### Two-Wire Non-Contact Level Transmitter for Hazardous Environments

#### Features

**Two Wire "Loop Powered"**

4-20 mA interface reduces wiring, minimizes power consumption and is compatible with most process equipment.

**Simple Mounting** in liquid tanks using the 2-inch NPT lower threads or 3/4 inch NPT upper threads.

**Chemically resistant housing** is encapsulated and includes either a sealed, strain-relieved cable or M12 quick-disconnect connector. Various cable lengths are available.

**Range calibration** is factory set to 4 mA at 25 feet and 20 mA at 1 foot.

**SenixSAFE-L software** supports configuration, testing, and storage / recall of setups. Requires UA-RCD-L Remote Calibration Device.

#### Benefits

**Rugged Package** can be installed indoors or outside to provide years of maintenance-free operation. Standard tapered upper and lower threads are compatible with common flanges and other fittings.

**Intrinsically Safe** design permits operation in hazardous environments in the US and Canada. All electronics are contained in the transmitter housing. External safety barriers are required in hazardous area installations.

**Measurements** are made without contacting the liquid or solid material and are:

- Long range, short dead band
- Unaffected by optical factors like color and transparency
- Narrow beam
- Temperature compensated

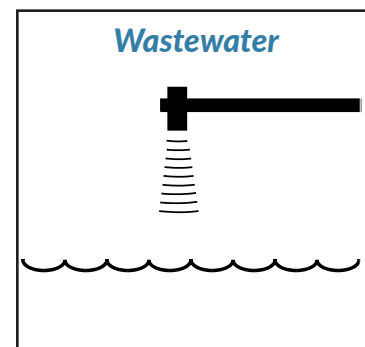
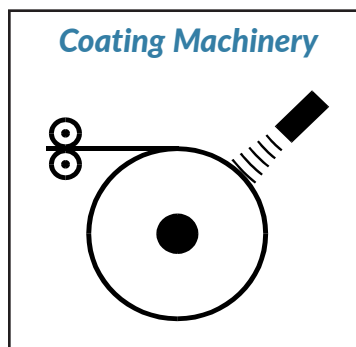
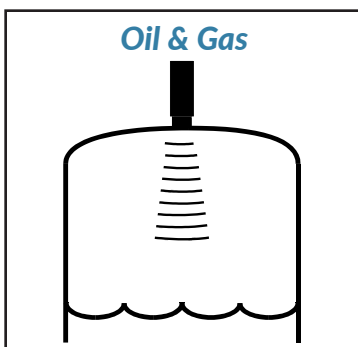
#### Applications

This transmitter is used primarily for liquid level measurement of vessels in hazardous areas. It also measures open-air distance to target objects such as the roll diameter on a coating machine.

This transmitter should be used only in applications with relatively slow moving targets.

**Example Applications:**

- Industrial liquid tank level
- Wastewater treatment
- Paint finishing
- Coating machinery
- Service stations
- Laboratories
- Airports
- Welding bays



SAFESONIC™ 25-L



## SafeSonic™ 25-L CID1 Level Sensor

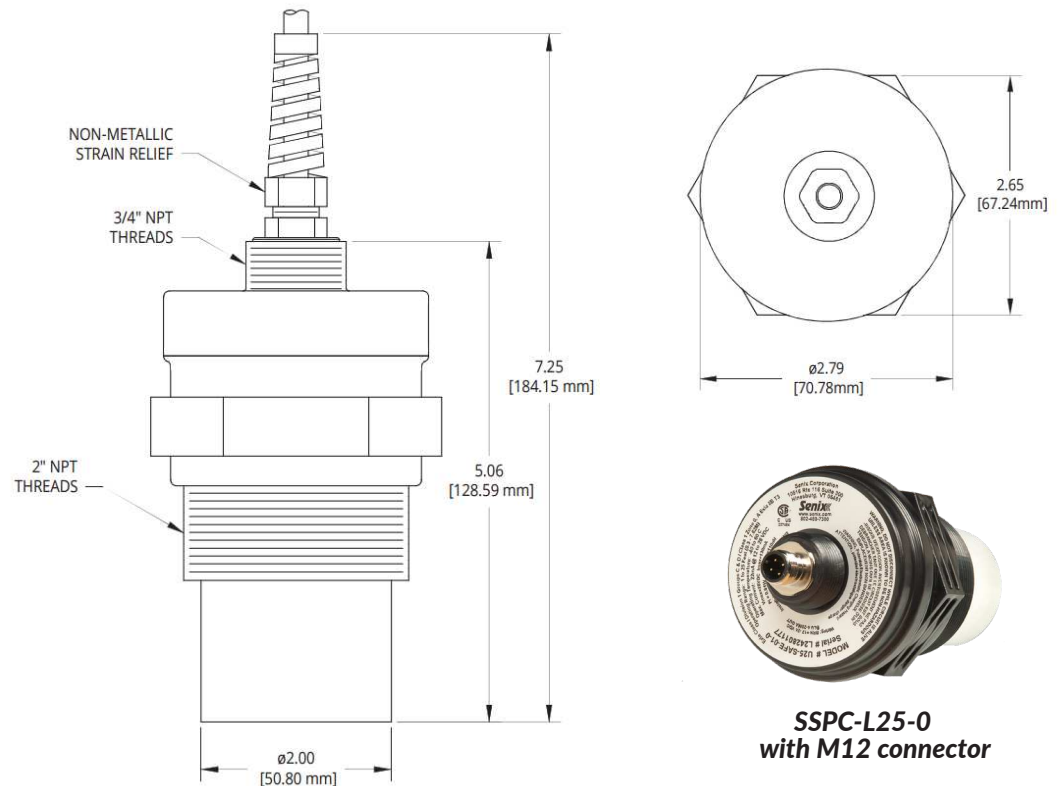
### Specifications

<b>Accuracy</b>	+/- 0.25% of detected range	<b>Max Range</b>	25 feet (7.6 m)
<b>Deadband</b>	Typ. < 12 in. (305 mm)	<b>Beam Width</b>	9° ± 1° off axis
<b>Update Rate</b>	< 30 seconds	<b>Resolution</b>	0.1 in. (2.5 mm)
<b>Temperature</b>	-40 to 140 F (-40 to 60 C)	<b>Protection</b>	NEMA-4X, IP65
<b>Humidity</b>	0 to 100%	<b>Transducer</b>	Ruggedized Piezoelectric
<b>Compensation</b>	Selectable temperature compensation	<b>Weight</b>	1.5 lb. (0.68 kg)
<b>Pre-calibration</b>	4 mA at 25 feet, 20 mA at 1 foot	<b>Configuration</b>	Stored in sensor's non-volatile memory
<b>Adjustment</b>	SenixSAFE-L PC Software (requires UA-RCD-L Remote Calibration Device isolated in unclassified area)		
<b>Approvals</b>	CSA, United States and Canada, for Class I Division 1 Groups C & D, T3 and Class I Zone 0, AEx ia IIB, T3 and Ex ia IIB, T3		
<b>Materials</b>	Transducer: PVDF (Kynar®), Housing: PC/PBT		
<b>Response time</b>	10 seconds; varies depending on output range and setup		
<b>Cable</b>	PUR jacketed, UV resistant, shielded, 2-wires plus drain, several standard lengths available		
<b>Electrical</b>	2-wire plus drain; RED = 12-28 VDC in (4-20 mA current source); BLACK = 4-20 mA output		

### Target Requirements

<b>Objects</b>	Detects liquid surface, flat or curved objects. Surface must reflect ultrasound to sensor
<b>Distance Range</b>	Affected by size, shape, orientation of target (sound level reflected back to sensor), environment
<b>Orientation</b>	Sensor should be oriented perpendicular to liquid surface for maximum reflection
<b>Optical</b>	Unaffected by target color, light, transparency or other optical characteristics

### Mechanical



### Part Numbers

Model Number	Description
SSPEC-L25-0	Sensor with 4-pin M12 connector
SSPEC-L25-6	Sensor with 6-ft cable
SSPEC-L25-LLL	Sensor with longer cable lengths. Options are: LLL = 10, 20, 30, 50, 100 (number indicates length in feet)
UA-RCD-L	Remote Calibration Device, connects <b>SenixSafe</b> software from non-hazardous side