

# Technical Specifications

hydra-wave Intrinsically safe Two-Wire Ultrasonic Level Transmitter

**Transmitter provides non-contact measurement up to eighteen feet.**

The two-wire, intrinsically safe ultrasonic level transmitter is mounted through the top wall of the tank and provides non-contact measurement up to 18 feet. With non-contact technology, the transmitter is an excellent choice for applications with dirty, coating, slurry or corrosive type liquids.

A high frequency ultrasonic sound wave is pulsed two times per second from the base of the transducer. The sound wave reflects against the process medium below and returns to the transducer. The microprocessor based electronics measure the time of flight between the sound generation and receipt, and translates this figure into the distance between the transmitter and process medium below.



## Features & Benefits

- Accurate and reliable measurement from 0.5 feet to 18 feet
- 8° beam allows application in restricted environments
- Rugged NEMA 4X enclosure with PVDF transducer
- Adjustable blocking distance filter for broad application
- Automatic temperature compensation over entire range
- Easy push button calibration for all user set points
- LCD digital display indicates level in inches or centimeters
- Digital signal filtration eliminates false echo signal returns
- Fail-Safe intelligence provides maximum process safety
- Intrinsically safe when used with an approved I.S. Barrier such as Stahl 9001/51-110-14


## Features & Benefits Continued...

General Purpose	Yes
Conductive	Yes
Non-conductive	Yes
△ Conductive	Yes
Non-contact	Yes
Clean	Yes
Dirty	Yes
Coating	Yes
Non-coating	Yes
Ambient pressure	Yes
Low pressure	Yes
Intrinsically safe	Yes
Medium pressure	No
Integral relay	No
Foam	No
Contact	No
Vapors	No
△ Gas density	No
Vacuum	No

## Specifications

Range:	0.5 to 18' (15 cm to 5.4 m)
Accuracy:	± 0.25% of span in air
Resolution:	0.125" (3 mm)
Frequency:	50 kHz.
Pulse rate:	2 per second
Beam width:	8° conical
Dead band:	0.5' (15 cm) minimum
Display type:	LCD
Display units:	Inches (cm)
Memory:	Non-volatile
Supply voltage:	14-32 VDC
Loop resistance:	900 ohms @ 32 VDC
Signal Invert:	4-20 mA/20-4 mA
Signal output:	4-20 mA
Calibration:	Push button
Fail-safe diag.:	22 mA

Temp. rating:	F: -40° to 140° C: -40° to 60°
Temp. comp.:	Automatic over entire range
Pressure rating:	30 psi (2 bar) @ 25°C., derated @ 1.667 psi (.113 bar) per °C. above 25 °C.
Enclosure rating:	NEMA 4X (IP65)
Enclosure Mat'l:	Polypropelene (U.L. 94 VO)
Transducer Mat'l:	PVDF
Mounting threads:	2" NPT
Mounting gasket:	Viton (2") metric
Conduit conn.:	1/2" NPT
CE Compliance:	EN 50082-2 immunity EN 55011 emission
CSA Certificate:	LR79326-10

	LR79326-10
NRTL/C	
Intrinsically Safe/ Securite Intrinseque	
Exia	
For use in	
Hazardous Locations:	
Class I, Groups A, B, C & D	
Class II, Groups E, F & G	
Class III	
Temperature Code: T3C	
Intrinsically Safe when used with an approved I.S. barrier. Entity Parameters	
V <sub>max</sub> = 32.0 VDC	
I <sub>max</sub> = 130 mA	
C <sub>i</sub> = 0 mF	
L <sub>i</sub> = 0 mH	
Warning: Suitable for Class I, Groups A, B, C & D; Class II, Groups E, F & G; Class III, T3C; when used with an approved I.S. barrier. Substitution of components may impair intrinsic safety LU20-50X1-IS requirements for Intrinsically Safe operation	



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Specifications subject to change without notice.  
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KM is represented in your area by:



### WORLD HEADQUARTERS

150 Venture Boulevard  
Spartanburg, SC 29306 USA

**1.800.426.9010**

tel: 864.574.2763

fax: 864.574.8063

kistlermorse.com

