



# Technical Specifications

hydra-wave Three-Wire  
Ultrasonic Level Transmitter

**Transmitter provides accurate and reliable measurements from 1/2 to 24 1/2 feet.**

The three-wire, general purpose ultrasonic level transmitter is mounted through the top wall of the tank and provides non-contact measurement up to 24.5 feet with an integral relay for pump, valve and alarm control. With non-contact technology, the transmitter is an excellent choice for applications with dirty, coating, scaling or corrosive type liquids.

A high frequency ultrasonic sound wave is pulsed eight 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 24.5 feet
- Integral relay for alarm or automatic filling or emptying
- 8° beam allows application in restricted environments
- Rugged NEMA 4X enclosure with PVDF transducer
- Automatic temperature compensation over entire range
- Easy push button calibration for all user set points
- LED 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 9001/51-280-110-14



## Features & Benefits Continued...

General Purpose	Yes
Integral Relay	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	No
Medium pressure	No
Foam	No
Contact	No
Vapors	No
△ Gas density	No
Vacuum	No

## Specifications

Range:	0.5 to 24.5' (15 cm to 7.4 m)
Accuracy:	± 0.25% of span in air
Resolution:	0.125" (3 mm)
Frequency:	50 kHz.
Pulse rate:	8 per second
Beam width:	8° conical
Dead band:	0.5' (15 cm) minimum
Display type:	4 segment LED
Display units:	Inches (cm)
Memory:	Non-volatile
Supply voltage:	14-36 VDC
Consumption:	200 mA maximum
Current Flow:	Source
Signal output:	4-20 mA, 14-36 VDC
Calibration:	Push button
Relay Type:	(1) SPDT

Relay current:	250 VAC, 10A, 1/2 hp
Relay mode:	Selectable NO or NC states
Contact resist.:	30 milliohms
Fail-safe diag.:	
Current	22 mA
Relays	Safe position
Temp. rating:	F: -40° to 140° C: -40° to 60°
CIP Temp:	F: 230° (C: 110°) max.
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 EN 61010-1 safety



Internal cut-away view



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Specifications subject to change without notice.  
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