

# LevelSonic

## Ultrasonic Level Transmitter

### Product Range

Sonic 5 Transmitter	SVP2 - indicator/controller
Sonic 7 transmitter	SVP4 - indicator/controller
Sonic 10 transmitter	SV - loop indicator
Open Channel transmitter	SS2 - level switch

### Hazardous Products:

Sonic 5 EEx ia IIC T6  
Sonic 7 EEx ia IIC T6



### Sonic Transmitter Specifications

Range	Sonic 5	-	10 inches to 17 ft liquid 10 inches to 8 ft solids
	Sonic 7	-	10 inches to 17 ft liquid 10 inches to 8 ft solids
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mA output		-	4-20ma, span proportional
Accuracy		-	0,25 % of full span
resolution		-	0.1 inch (3mm)
Frequency	Sonic 5	-	56kHz
	Sonic 7	-	50kHz
	Sonic 10	-	46kHz
Calibration		-	using a magnetic key
Display		-	Two visible LEDs
Power supply		-	17 to 30 Vdc
Power maximum		-	0.48 Watts
Power surge on start		-	26 mA
Loop current output		-	linear 4 to 20 mA
Default mA output		-	set to 4mA, configuration can be changed, consult the installation manual
Loop load maximum		-	250 ohms
Beam angle		-	7 degrees
Response rate		-	set 16 ft/min, configuration can be changed, consult the installation manual
Temp compensation		-	built -in PT100 for auto compensation across full range
Temp range		-	- 20° F to + 170 ° F
Sensor temp max		-	180 ° F (220 F/100 C for 30 min)
Pressure (vessel) max		-	28 psi (G) (2 Bar / 200 kPa)
Construction		-	combined transducer and Electronics: Transducer.. TEFLON Electronic body. UPVC Label cover.clear acrylic

The small, compact Sonic ultrasonic level transmitter offers non-contact measurement of liquids and solid levels. The transmitter is two-wire loop-powered and uses a simple magnetic key to set up the level range to be measured, as well as selecting the response rate and default currents. On-board AND visible operating and fault indication keeps you informed of the operational and fault status at the transmitter.

### Special features:

- IP 68 rating and lightning protection - Water Industry
- Hazardous certification - Petrochemical Industry
- TEFLON nose, inert to acids - Chemical Industry
- Tri-clover couplings - Food Industry

Enclosure rating	-	NEMA 6X (IP68+ submersible)
Memory	-	non-volatile EEPROM
Weight	-	2 LBS, including cable
Mounting options	-	2" NPT thread on nose 2"ANSI PVC flange
Volt drop across Sonic @ 4mA	=	1, 9V
@ 20mA	=	4,3 V
Minimum operating V	-	17 Volts dc

we continually strive to improve the performance of our products and reserve the right to change the product specifications without notice....



# SONIC 5 USA

Level transmitter



loop powered

PRODUCT REFERENCE SONIC5-1B1N5

## OPERATING MANUAL

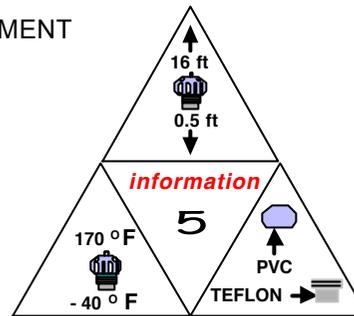
The SONIC™ is a cost effective, ultrasonic level transmitter for measuring and monitoring liquid levels in open and closed tanks. Its small size makes it supercompact, combining sensor and electronics in one housing. The nose section is manufactured from Teflon™. This Dupont™ material is resistant to most chemicals, and includes an on-board, temperature sensing element to ensure correct level measurement at all temperatures. The electronics housing is manufactured from UPVC.

The SONIC™ transducer transmits a series of short, controlled, ultrasonic pulses towards a surface. The reflected echoes are intelligently conditioned to remove any noise, and the time taken for the echoes to reach the sensor face are calculated and converted to distance for transmission as a current loop output.

Zero and full tank levels are entered into the SONIC™ by touching the Z and S targets, on the Sonic body, with the magnetic key provided. The Sonic does the rest. The SONIC™ offers on-board and visible LED indication to confirm power is ON and that the unit is working correctly.



## ENVIRONMENT



## INTERCONNECTIONS

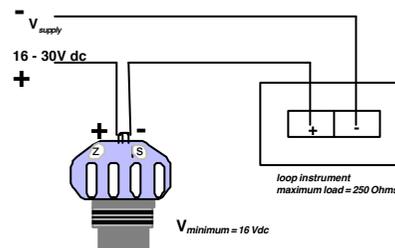
The SONIC is terminated away from the instrument, at the end of the integral cable to preserve the NEMA 6X sealed rating. The 4/20mA loop can be supplied up to ½ mile away from the Sonic. Wiring must conform to standard instrumentation practices and wiring codes. The SONIC is reverse polarity protected and protected against lightning strikes

NOTE: If the supply is reverse polarity connected both LEDs will stay off. Please ensure the red wire is connected to the positive

## CABLE SCREENING

The 4/20 mA output from the Sonic does not require screening. Leave the screen floating and disconnected

## WIRING



## INSTALLATION

Do not over-tighten the Sonic in the mounting

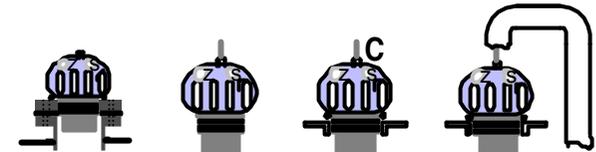
Always ensure that the Sonic is mounted perpendicularly to the reflecting surface

Avoid mounting the sonic in the centre of the roof of the tank

Mount the Sonic 5 at least 0.5 ft above the highest expected level.

For dams, open reservoirs, or open tanks, the preferred mounting method is to suspend the Sonic from its own cable.

## TANK MOUNTING OPTIONS



Flange hang from cable NPT boss pipe stand

Use a rubber gasket to avoid acoustic coupling.	Suspend the sonic from its own cable	Use the 'O' ring provided to reduce acoustic coupling. Hand tighten only.	Preferred installation for open tanks, dams, weirs, etc
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## DIMENSIONS

