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# KSONIK™

## General Purpose Ultrasonic Level Transmitter Model KSONIK I

### FEATURES

- Range to 49.2 ft. / 15 meters
- Isolated 4 - 20 mA Output
- Graphic LCD Display
- Integrated KSCOPE Analytical Software
- 3 Configurable Relays / 8 Amp
- Configurable as Open Channel Flow Meter
- Pump Cycling and Pump Monitoring
- Remote Totalizer Count Outputs
- Automatic Variable Gain & Power for Difficult Applications

### OPTIONS

- Transducers for Liquids, Solids & Corrosive Liquids
- Windows Based Configuration Software
- Aiming Kit

### APPLICATIONS

- Various Liquids Including Water Storage Tanks
- Moderate Range Solids Such as Loading & Bagging Hoppers
- Mineral Oil
- Open Channel Flow Measurement in the following configurations:
  - V-Notch
  - Flumes
  - Weirs

### DESCRIPTION

The KSONIK I is an Ultrasonic Level Transmitter capable of measuring liquid level or solid applications up to 49.2 feet /15 meters or flow rates in all types of open channel flow applications. The transmitter has a single 4-20 mADC analog output and three (3) relay outputs. A transducer is fitted to the top of a silo or tank, facing down towards the material being measured.

### OPERATION

The transmitter's microprocessor simultaneously fires an electronic pulse to the transducer and starts a timer. The transducer converts this electronic pulse to an acoustic pulse, which is directed toward the surface of the material being measured. When the acoustic pulse contacts the surface of the material, energy is reflected back to the transducer, which converts this reflected energy back to an electronic pulse. This pulse is sent back to the microprocessor, which stops the timer and determines the "time of flight" of the signal. By combining the speed of sound through air and the "time of flight" of the pulse, the microprocessor accurately determines the level of the product. Powerful software removes false echoes from the signal and electronic filters remove ambient noise.

### SPECIFICATIONS

Enclosure	Polycarbonate, IP65 / NEMA 4
Power Supply	120 VAC or 220 VAC; ±15% 50/60 Hz, 5VA Standard 24 VDC, 4 VA (Optional)
Dimensions	7.1 x 7.1 x 2.4 inches / 180 x 180 x 60 mm
Weight	3 lbs / 1.37 kg
Temperature Range	-22 to 149°F / -30 to 65°C
Output	Analog: 4-20 mADC Isolated (max impedance 750 ohms) with 16 bit resolution Relay: 3 ea. SPDT, 8 amp, 240 VAC; Fully Configurable
Range	49.2 ft. / 15 m
Accuracy	0.25% full span with temperature compensation
Local Indication	128 x 64 dot graphics display
Configuration	5 touch button keys or optional KSCOPE Software
Blanking Distance	Refer to Ultrasonic Transducer & Accessories ACS-0003-1
Rate of Change	0.03 to 65 ft / minute; 0.01 to 20 m / minute
Classification	General Purpose
CE Mark	EN 80081 EN 50081



**ORDERING INFORMATION:**

**Ordering Notes:**

- 1) Transmitter, Transducers & Accessories must be ordered separately.
- 2) The listed transducers below are compatible with the KSONIK I transmitter

**KSONIK I / a:**

/a	Power Supply
1	24 VDC
2	120 – 220 VAC

**TRANSDUCERS**

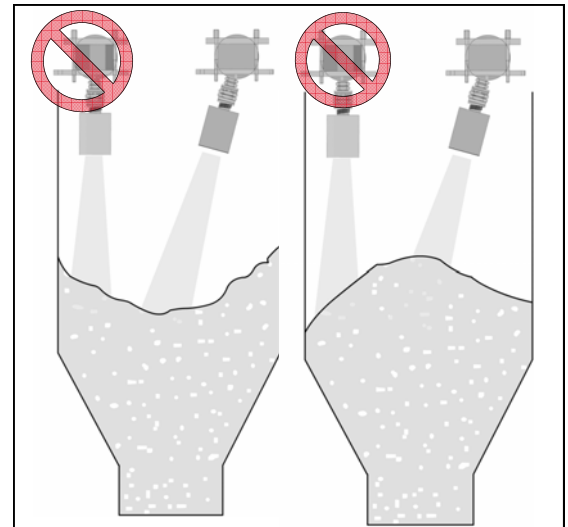
(order separately; refer to Transducer Data Sheet ACS-0003-1 for complete details):

Model	Measuring Range
K10C	Liquids (49.2 ft. / 15 m max) or Solids (16.4 ft. / 5 m max)
K10T3C	Corrosive Liquids (49.2 ft. / 15 m max) with 3" PTFE Lined Flange
K10T4C	Corrosive Liquids (49.2 ft. / 15 m max) with 4" PTFE Lined Flange
K10FC	Solids (49.2 ft. / 15 m max)

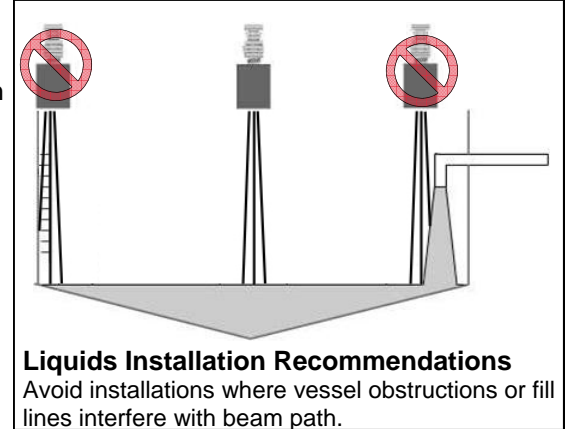
Note: All transducers are temperature compensated and are supplied with 16ft (5m) cable lengths.

**AVAILABLE ACCESSORIES**

AKIT	Aiming Kit (304 SS Mounting & Clamping Plates)
KSCOPE	KSONIK Scope Software

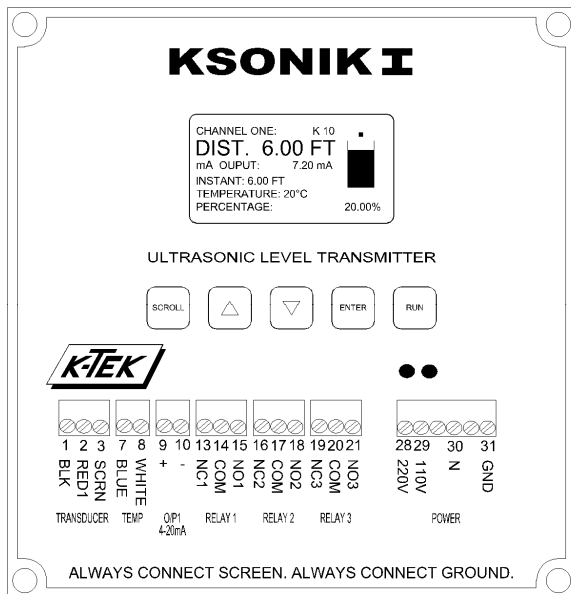


**Solids Installation Recommendations**  
Aiming Kit is recommended to aim at middle of silo. This helps to get the maximum return echo.



**Liquids Installation Recommendations**  
Avoid installations where vessel obstructions or fill lines interfere with beam path.

**AC WIRING CONNECTIONS**



**DIMENSIONS**

