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KSONIK™

**Compact “Loop Powered”
Ultrasonic Level
Transmitter
Model MICRO LP**

FEATURES

- Up to 16.4 ft / 5 m Measuring Range
- Low Cost, Compact Level Transmitter with Integral Transducer
- Four Digit Alpha-Numeric Display
- Ease of Installation & Configuration
- Auto Variable Power Control for Difficult Applications
- Temperature Compensation
- Password Protection
- No Maintenance

OPTIONS

- Flange Mounting (ANSI or DIN)
- PTFE Wetted Parts for Corrosive Applications

APPLICATIONS - Liquids only (no hydrocarbons)

- Slurries
- Diesel
- Raw Water
- Sumps
- Waste Water

DESCRIPTION

The KSONIK MICRO LP Ultrasonic Level Transmitter is designed to measure liquid (16.4 ft/ 5 m) levels. The range can be configured by the keyboard and display. The MICRO LP is mounted on top of the vessel or tank. The microprocessor in the MICRO LP fires an electronic pulse that the transducer converts into an acoustic pulse. The pulse travels to the level that is being measured and is reflected back to the transducer. The transducer then converts the energy back into an electronic signal and stops the counter in the microprocessor, which then knowing the speed of sound through the air, can accurately determine the distance. The powerful software removes false echoes and the electronic filter removes ambient noise.

SPECIFICATIONS

Enclosure	Enclosure: Polycarbonate, IP65 Transducer: UPVC (Standard) , IP 68, PTFE (<i>optional</i>)
Power Supply	24 VDC (20 to 30 VDC)
Electrical Connection	1/2" FNPT
Operating Frequency	53kHz
Beam Angle	10°
Dimensions	Electronics: 6.4 in x 4.3 in / 197 mm x 86 mm Transducer: 2.5 in x 2.2 in / 59 mm x 85 mm
Weight	1.7 lbs / .78 kgs
Process Connection	2" MNPT; 2" FNPT PVC retainer nut included for open top tank installations
Temperature Range	-22 to 149°F / -30 to 65°C Temperature Compensated
Output	Transmitter: 4-20 mADC 16 bit (max impedance 750 ohms)
Range	16.4 ft / 5 m
Accuracy	± 1% Full Span
Local Indication	4 Digit LCD
Configuration	5 touch button keys
Blanking Distance	1 ft / .3 m
Rate of Change	0.3 to 33 ft / minute; 0.1 to 10 m / minute
Classification	General Purpose
CE Compliance	EN 50082-2 Immunity EN 50081 Emission EN 61010-1 Safety



ORDERING INFORMATION:

KMICRO / a / b / c / d :

/a Device Type

LP Loop Powered

/b Transducer Material / Application

UPC Liquids to 16 ft / 5 m

General Purpose **Standard**

PTF Liquids to 16 ft / 5 m

Corrosive Applications

/c Power Supply

1 20 - 30 VDC **Standard**

/d Mounting Options

X No Mounting option Required (2" MNPT) **Standard**

3 3" ANSI flange connection, PVC

4 4" ANSI flange connection, PVC

6 6" ANSI flange connection, PVC

D80 80 mm flange connection, PVC

D100 100 mm flange connection, PVC

D150 150 mm flange connection, PVC

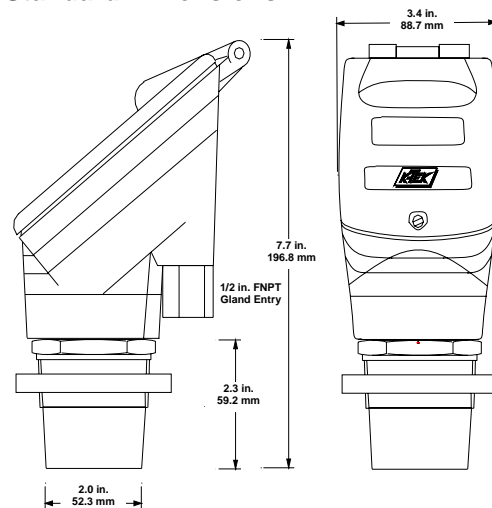
CF Custom Flange (Consult factory for available sizes and materials)

Application Guidelines:

The ultrasonic pulse leaves the sensor as a narrow beam that increases in width with the increasing distance from the device. Every object within this beam produces an interface echo which is received by the sensor. Interface echoes can be suppressed by mounting the sensor at right angles to the material surface and clear of any internal tank obstructions

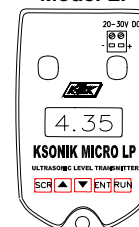
MICRO LP Measuring Length vs. Beam Width		
Liquid		
Beam (ML)		Max Beam (W)
2 ft		2 in
10 ft		7.5 in
16 ft		11.5 in

Standard Dimensions

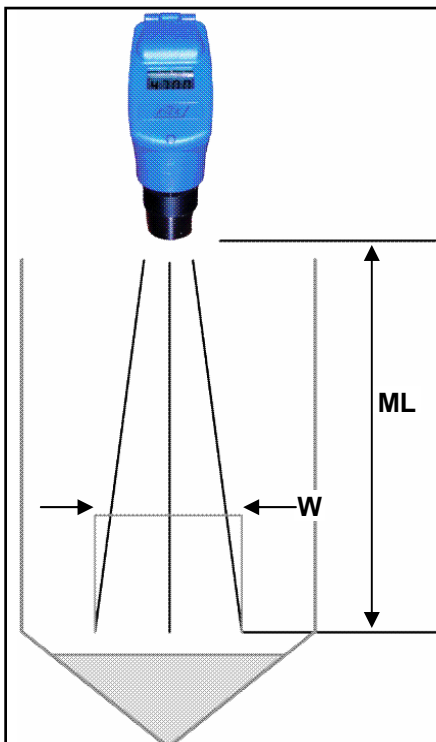


FACEPLATE

Model LP



Minimum D (in/mm)	45°Max L (in/mm)	90° Max L (in/mm)
3 in	27 in	12 in
80 mm	700 mm	300 mm
4 in	39 in	14 in
100 mm	1000 mm	350 mm
6 in	71 in	51 in
150 mm	1800 mm	1300 mm

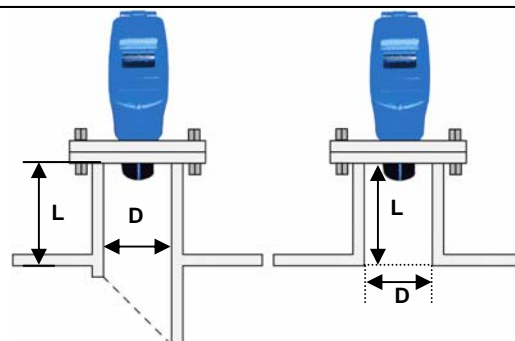


Nozzle Installation:

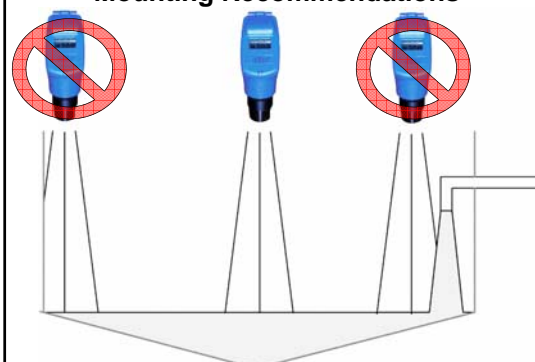
The KSONIK MICRO LP must be installed at a height so that the blanking distance is not interfered with, even at the maximum fill level. A pipe nozzle can be used if you cannot obtain the blanking distance in any other way or if a nozzle is pre-existing on a tank structure. The interior of the nozzle must be smooth with no edges, welded joints or burrs on the inside of the tank side nozzle end.

Notes:

1. Installations require a minimum 3 in / 80 mm diameter (D) and can effectively measure with a maximum 12 in / 300 mm nozzle length (L).
2. The MICRO LP may not function correctly if the blanking distance is not above the maximum level measured.
3. Best results are achieved with a 45° cut nozzle



Mounting Recommendations



K-TEK

18321 Swamp Road
Prairieville, Louisiana 70769
USA

Telephone: (1) 225-673-6100

Fax: (1) 225-673-2525

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For the latest version of this datasheet,
visit www.ktekcorp.com.



Email: sales@ktekcorp.com
Website: www.ktekcorp.com