Data sheet DS/KMICROLP-EN Rev. G

KSONIK MICRO LP
Ultrasonic level transmitter
K-TEK products

Loop powered
ultrasonic level transmitter

Measurement made easy

Introduction

The KSONIK MICRO LP Ultrasonic Level Transmitter is designed to measure liquid (16 ft./5 m) levels. The range can be configured by the keyboard and display. The KMICRO LP is mounted on top of the vessel or tank. The microprocessor in the KMICRO 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.

Applications

Liquids Only
- Slurries
- Sumps
- Diesel
- Waste Water
- Raw Water

Options

Flange Mounting (ANSI or DIN)

Features

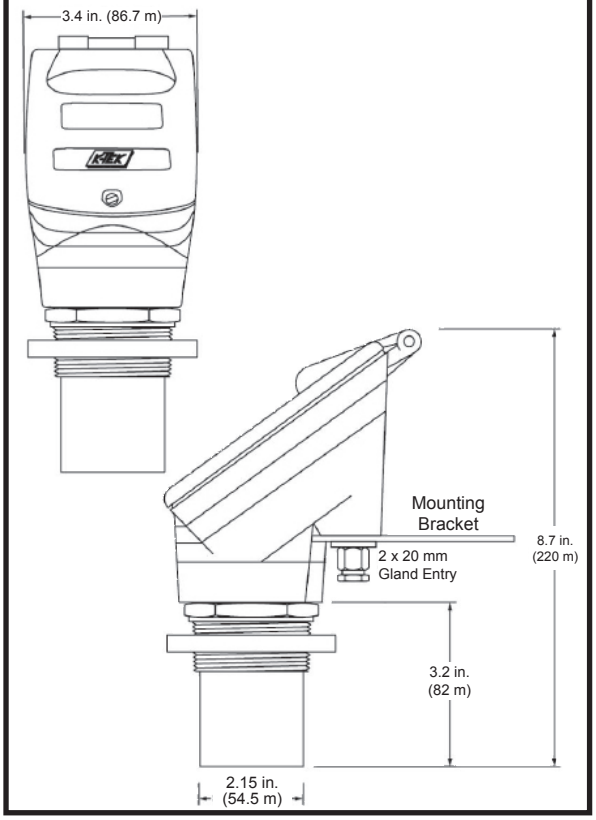
- Up to 16 ft. / 5 m Measuring Range
- Low Cost, Compact Level Transmitter with Integral Transducer
- Four Digit Alpha-Numeric Display
- Ease of Installation & Configuration
- Auto Variable Power Control for Difficult Applications
- Temperature Compensation
- Password Protection
- No Maintenance
- PVDF Wetted Parts for Corrosive Applications

Power and productivity
for a better world™

SPECIFICATIONS

Enclosure	Enclosure: Polycarbonate, IP65 Transducer: IP 68, PVDF
Power Supply	24 VDC (20 to 30 VDC)
Electrical Connection	20 mm
Operating Frequency	53kHz
Beam Angle	10°
Dimensions	Electronics: 8.7 in x 4.3 in / 220 mm x 86 mm Transducer: 2.2 in x 3.2 in / 56 mm x 82 mm
Weight	2.64 lbs / 1.2 kgs
Process Connection	2" MNPT; 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 ft. / 5 m
Accuracy	1% full span with temperature compensation
Local Indication	4 Digit LCD
Configuration	5 touch button keys
Blanking Distance	1 ft. / 0.3 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

DIMENSIONS



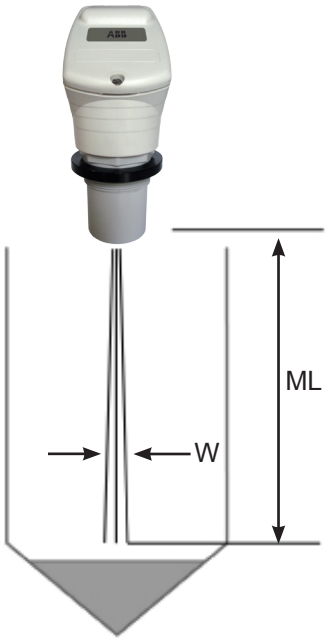
ORDERING INFORMATION

KMICROLP/a/b/c/d		
/a	Device Type	
	LP	Loop Powered
/b	Transducer Material / Application	
	PVDF	Liquids to 16 ft. / 5 m **Standard** Including Corrosive Applications
/c	Power Supply	
	1	20-30 VDC **Standard**
/d	Mounting Options	
	X	No Mounting option Required (2" MNPT) **Standard**
	BSP	2" BSP thread
	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



KSONIK™

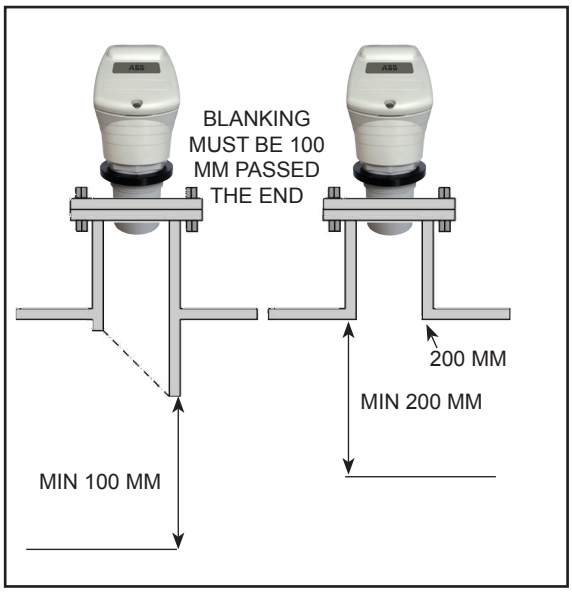
FACEPLATE

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



Contact us

ABB Engineering (Shanghai) Ltd.
No.5, Lane 369, Chuangye Road,
KangQiao Town, Pudong District,
Shanghai, 201319, P. R. China
Phone: (86) 21 6105 6666
Fax: (86) 21 6105 6992

www.abb.com/level

Note
We reserve the right to make technical changes or modify the contents of this document without prior notice. With regard to purchase orders, the agreed particulars shall prevail. ABB does not accept any responsibility whatsoever for potential errors or possible lack of information in this document.

DS/KMICROLP-EN Rev. G 05.2014

Power and productivity
for a better world™