

SIGMA US4000 LEVEL SENSOR

FEATURES

- Nema 4 Junction Box
- Stainless Steel Body
- IP68 Sealed, Waterproof Design
- 4/20MA 0/5-0/10VDC Wire Output
- Ranges: 0-14, 0-30 Feet
- Small 6" Near Zone (10" 30 FT Model)
- Microprocessor Based
- Sync. Connection for Multiple Installations
- Narrow Beam Angle
- RS232, 485 Digital Output
- Fully User Programmable
- .1% Repeatability



DESCRIPTION

The Sigma Series US4000 Ultrasonic Level Sensor is a non contact instrument designed for solids and liquid measurement. The microprocessor based electronics are fully programmable for zero and span points, response time, output type and measurement rate. Industry standard 4/20MA and 0-5/0-10VDC dual outputs are available.

CONSTRUCTION

The 30MM (60MM, 30 Ft range) IP68 sealed waterproof body is constructed of 303 Series stainless steel and is threaded for ease of mounting.

A Nema 4 junction box is provided for conduit mounting and to allow access to the user programming adjustments.

OPERATION

The US4000 sensor measures level by sending an ultrasonic sound wave from the sensor to the liquid and measures the time taken for the signal to return to sensor. Knowing the speed of sound, the sensor can determine the level of the liquid or solid from the sensor element.

The ultrasonic signals are conditioned by the integral microprocessor and transmitted to the receiving equipment.

A push button and LED indicator at the rear of the sensor allow the user to program the zero and span points for both available outputs, measurement rate, response time and other programmable parameters.

A 'lock' feature prevents accidental changes to the programmed values.

MOUNTING

The Sigma US4000 must be mounted vertically with respect to the horizontal surface of the liquid or solid being measured. Two 30MM mounting nuts are provided and several styles of mounting brackets are available.

US4000 051514

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SERIES US4000 LEVEL SENSOR

ENGINEERING SPECIFICATION

Sensor Specifications

Type: Piezo electric

Ranges: 1.7 Inch to 14 Feet
10" to 30 Feet

Power: 15-30 VDC

Outputs: 4-20MA
0-5/0-10VDC

Measurement Rate:
40 Measurements/Second

Response Time:
50M Sec – 2 Inch/Second (Slow)

Resolution: 0.003384 Inches

Repeatability:
0.1% Target Range @
Constant Temp.

Temperature: -40-70° C

Humidity:
0-100% (Condensation may
affect readings)

Construction:
303 SS Body
Nema 4 Aluminum Enclosure

Connections:
6'-0" Cable

Weight:
18 Oz.

The level transmitter shall be of the non-contact, top mounted type, suitable for installation in high humidity, non-condensing areas.

The unit body shall be constructed of non-corrosive 303 stainless steel and shall include a Nema 4 electrical terminator enclosure.

The transmitter shall include programmable microprocessor based electronics that permit configuration of outputs, measurement rate, response time and full scale range.

Programming shall be simple and utilize a pushbutton/LED indicator system.

