

MetriSonic Ultrasonic Level Transmitter from JOWA Consilium

Model MS-30

High performance Loop powered 2-Wire Ultrasonic Level Transmitter with the features of a line powered system.

Features:

- Level monitoring to 30 ft. (9.1 m)
- Accuracy +/- 0.15% of sensor range
- NEMA 4X, IP65 rated
- Level or Open Channel Flow monitoring
- FM Approved Intrinsically Safe
- Simple set-up via built-in display, PC software, or HART communicator
- Two line, 7-digit LCD display
- Automatic Tank Profiling - automatically ignores most internal obstructions
- HART Configurable

Whether used to measure level or open channel flow this full featured 2-wire Ultrasonic transmitter offers the performance and features of line-powered systems without the expense.

The sensor has a range of 30 ft. (9.1 m) with an accuracy of +/- 0.15% full scale. Setup is done via PC software, a HART communicator or through a simple menu structure on the front panel. The user friendly menu structure allows setting of the range directly in inches, feet, or metric units via the integral display with an environmentally sealed keypad.

Automatic tank profiling eliminates interfering signals from agitators and other internal tank



obstructions without the need to empty the tank and without operator intervention. Easily ignores pipes and obstructions that are in the sonic beam path.

The open channel flow configuration is done via 80 preset flume and weir characterizations. The user can also setup a custom characterization for uncommon flumes/weirs. Contained within the MS-30 are 2 totalizers (one is user resettable).

The compact transducer allows for mounting in any 2" nozzle. In cases where measuring to the very top of a tank is desired, the sensor can be mounted in a recessed nozzle.

Specifications:

Range: 1 to 30 ft. (0.3 to 9.1 m)

Input Power: 19 to 30 VDC

Output Signal: 2-wire, 4-20mA, HART (isolated)

Accuracy: +/- 0.15% or 0.2 inch (5 mm) of sensor range, whichever is greater.

Maximum Loop Resistance: 600 ohms at 24 VDC.

Output Mode: Level, Distance, Flow or Volume

Response Time: 300 milliseconds.

Frequency: 50KHz

Operating Temperature Range: -40° to 158°F (-40° to 70°C)

Automatic Temperature Compensation: Built-in and temperature shown on the display.

Display: 2-line, 7-digit LCD
Character height: top line 0.25", bottom line 0.36"
UV Rated - Sunshield not required

Fail-Safe: 3.7 and 22mA error signals - user selectable for lost echo and near zone violations.

Display Indications: Level, Distance, Flow rate, Totalization, Temperature, Signal strength, Milliamp, User selectable, multiple selections can be scrolled automatically.

Supported Flow Elements: Parshall, Rectangular Weirs (with and without end contractions), V-Notch, Trapezoidal (Weir & Flume), Leopold-Lagco, Palmer-Bowlus, "H" flumes

FM Approval: IS CL I, II, III DIV 1 GR A-G; CL I, Zone 0 AEx ia IIC; NI CL I DIV 2 GR A-D

Beam Angle: Conical, 10° (total) @ 3db down

Electrical Enclosures: PBT-RF (Valox UV Stabilized) to NEMA 4X (IP-65)

Sensor Material: CPVC

Signal Damping: User programmable from 0 - 99 sec.

Configuration: Local Display with Keypad, PC Software or HART Communicator.

Connection: 2-inch NPT

Pressure Rating: 50 psig (3.4 bar)

Mounting Dimensions

