



MIAL[®]
INSTRUMENTS PVT. LTD.
Measuring & Beyond

MULR

ULTRASONIC LEVEL
SENSOR



| Measuring & Beyond

CE

www.mialinstruments.com

MULR



Mial Ultrasonic Level Sensor

DESCRIPTION

Flow Meter:

The Mial MULR is a compact ultrasonic level sensor designed for continuous, non-contact measurement of various liquids, including oil and diesel. It comprises a probe and electronic units, both featuring a leak-proof design. These level sensors are extensively used in the HVAC, metallurgical, chemical, and oil industries. The Mial MULR ultrasonic level sensor offers accurate and reliable level sensing with features such as non-contact operation, high reliability, cost-effectiveness, and ease of installation and maintenance.

APPLICATIONS

HVAC (Heating, Ventilation, and Air Conditioning):

The Mial MULR Ultrasonic level sensor ensures precise monitoring of liquid levels in heating, ventilation, and air conditioning systems. This helps maintain optimal performance and efficiency of chillers, boilers, and cooling towers, preventing issues like overflow or dry running, which can lead to equipment damage and increased maintenance costs.

Chemical Industry:

The MULR sensor is essential for monitoring liquid levels in various chemical processes. Accurate level sensing ensures safe handling and storage of hazardous chemicals, prevents spillage, and helps maintain the integrity of the processes. The sensor's resistance to acids and alkalis makes it ideal for use in harsh chemical environments.

Oil Industry:

The MULR tracks levels of oil, diesel, and other petroleum products in storage and processing facilities. Reliable level measurement helps in inventory management, prevents overfilling and spillage, and ensures smooth operations. Its robust design and resistance to harsh conditions make it suitable for use in oil refineries and storage tanks.

Water Treatment Plants:

In water treatment plants, the MULR ultrasonic level sensor measures water levels in treatment tanks and reservoirs. This precise monitoring is crucial for managing water resources efficiently, ensuring proper treatment processes, and preventing overflow or shortage in supply. The sensor's easy maintenance and reliable performance are particularly advantageous in this sector.

Pharmaceutical Industry:

In pharmaceutical manufacturing, the MULR ultrasonic level sensor manage liquid levels in various processes, ensuring precision and hygiene. Accurate level measurement is vital for the consistency and quality of pharmaceutical products. The sensor's non-contact measurement method is ideal for maintaining the sterility required in this industry.



MULR Ultra Sonic Leel Sensor

FEATURES

The In Integrated Design, Convenient Installation

The Mial MULR ultrasonic level sensor boasts an integrated design that simplifies the installation process. This streamlined configuration minimizes the need for additional components and reduces setup time, making it an ideal choice for quick and efficient deployment in various industrial applications.

Large LCD Display Window for Easy Debugging and Observation:

MULR Equipped with a large LCD display window, the sensor facilitates easy debugging and observation. This clear and comprehensive display allows operators to quickly and accurately monitor liquid levels and sensor status, enhancing usability and operational efficiency.

Over-Voltage, Over-Current, and Lightning Protection:

To ensure robust performance and longevity, the sensor includes over-voltage, over-current, and lightning protection. These features safeguard the device against electrical surges and spikes, preventing damage and ensuring reliable operation even in environments with unstable power conditions.

Advanced Clamp Type Terminal to Ensure Secure Wiring

The advanced clamp-type terminal design guarantees that wiring remains secure and never loosens. This feature enhances the reliability of the sensor's connections, reducing the risk of operational failures due to loose or faulty wiring.

Intellectual Signal Treatment Technology for Versatile Operation

The MULR sensor incorporates intellectual signal treatment technology, which ensures it can operate effectively in a variety of conditions. This advanced processing capability allows the sensor to deliver consistent and accurate measurements across different operating environments, adapting to various challenges and requirements.

Optional ABS or PTFE Probe for Acid and Alkali Resistance

Users can select between an ABS or PTFE probe, both of which offer exceptional resistance to acids and alkalis. This adaptability makes the sensor suitable for use in harsh environments where chemical resistance is crucial, ensuring reliable performance even under adverse conditions.

BENEFITS OF FLOW METER

- Non-contact measurement eliminates the need for maintenance.
- Stable measurement unaffected by the properties of the measuring medium.
- Cost-effective solution for simple applications.

MULR specifications*

Operation and performance

Fluid types

Clean liquids

Level Range 4m, 6m, 8m, 12m, 20m

Accuracy

0.5% - 1.0%

Resolution

3mm or 0.1%

Measurement parameters

Display Percentage, Current Data, Distance

Certification

Calibration certification

Electronics

Display

LCD

Enclosures

Aluminium

Enclosure IP rating

IP65

Power supply

24 VDC

Use SMPS when employing AC power

Ambient temperature

Transmitter: -4°F to 140°F (-20°C to 60°C)

Sensor: -4°F to 176°F (-20°C to 80°C)

Standard output

Analog output : 4 to 20 mA , 250 Ω maximum load

Network Connection (Optional)

Modbus RS 485

Cable

10 Meter

Probe Materials

Standard: PVC

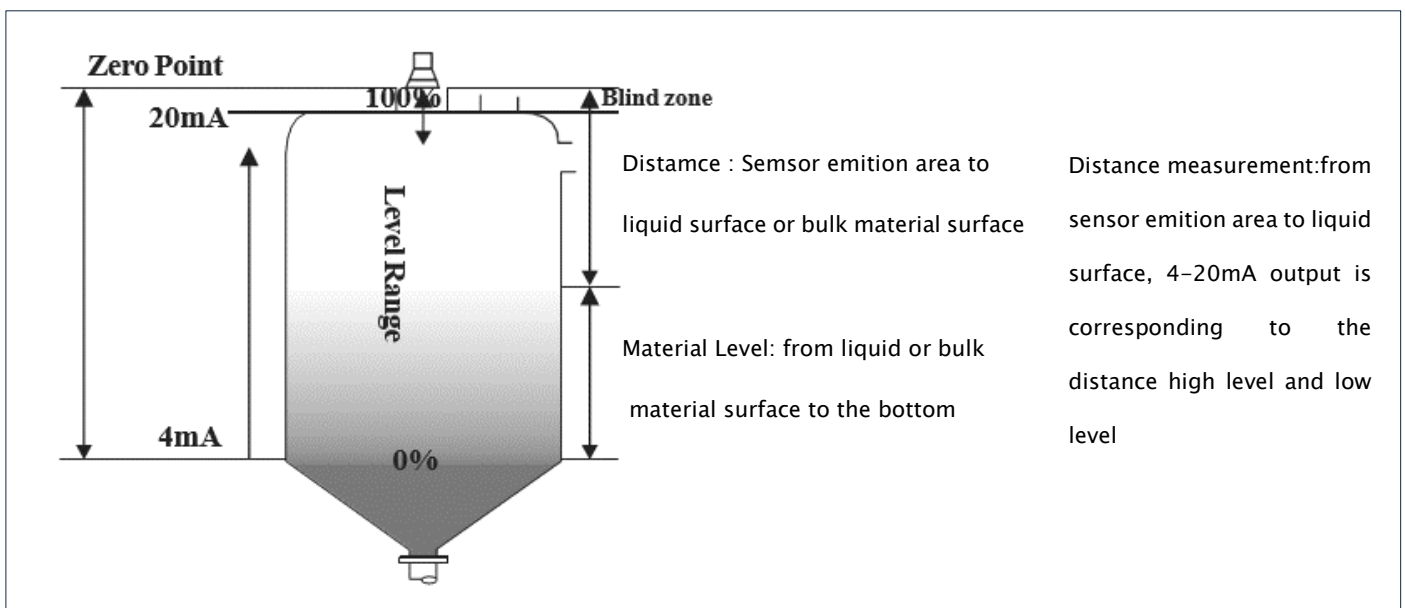
Optional: ABS, PTFE

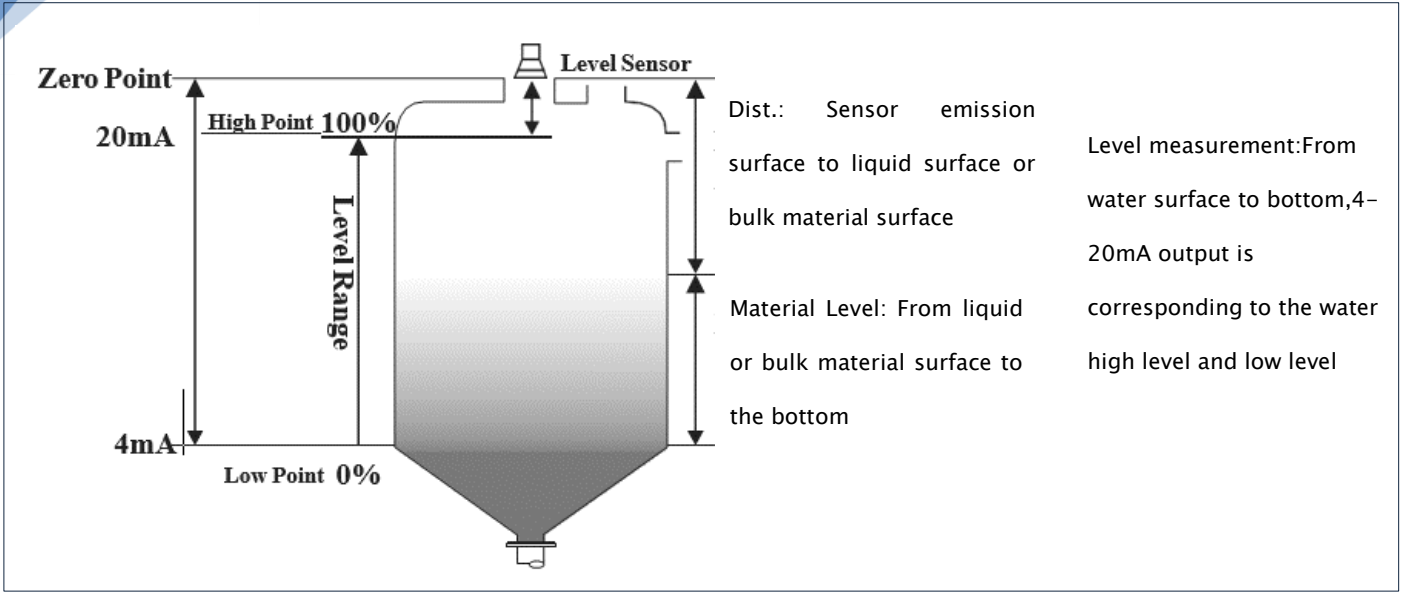
Sensor IP rating

Sensor :IP68

**Specifications are subject to change without prior notice.*

INSTALATION DIAGRAM





ORDERING CODE

Meter Model Number Coding = MULR-BB-CDE-F

MULR = Mial Ultrasonic Level Sensor	E = Probe Type
BB= Level Range	1 = ABS
4m= 04	2 = PTFE
6m= 06	3 = PVC
8m =08	F = Output
12m=12	1 = 4-20mA
20m= 20	2 = Modbus
C = Power Supply	
1 = 24 VDC	
D = Display Type	
1 = Integral	
2 = Remote	

All future orders will adhere to the standard specifications outlined in the order code, ensuring consistency and quality across items



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