

# Measuring & Beyond





## MIAL INSTRUMENTS PVT. LTD.



MUL SERIES
ULTRASONIC LEVEL SENSORS





## **MULR Level Ultrasonic Level Sensor**

The MULR series is a compact ultrasonic level sensor for continuous non-contact level measurement in different type of liquids including oil, diesel etc. It consists of probe and electronic units, both are coming with leak-proof structure. This level sensors are widely used in the HVAC, metallurgical, chemical and oil industries. The ultrasonic level sensor is designed to provide accurate and reliable level sensing with the features of non-contact, high reliability, cost-effective, easy to installed and maintained.

#### **Features**

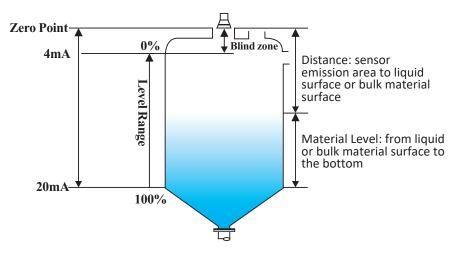
- Integrated design installed conveniently (remote option with max 10-meter cable).
- LCD display to debug and observe.
- Over-voltage over-current protection, lightning protection.
- Advanced clamp type wiring terminal, to ensure that wiring never loose.
- Selectable probes (ABS/PTFE). Acid, Alkali resistant and adapt to bad environments.
- Non-contact measurement, no need for maintenance.
- Stable measurement, not influenced by the measuring medium properties.
- Distance and level measurement capability.





## **Measuring Principle: Ultrasonic Transit time**

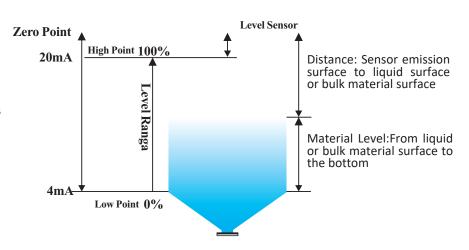
The sensor of the meter transmits ultrasonic signals in the direction of the liquid surface. There, they are reflected and received back by the sensor.



Distance Measurement: From Sensor emission area to liquid surface, 4-20mA output is corresponding to the distance high level and low level.

**Diagram of Distance Measurement** 

Level Measurement: From water surface to bottom,4-20Ma output is corresponding to the water high level and low level.

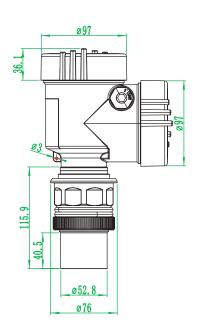


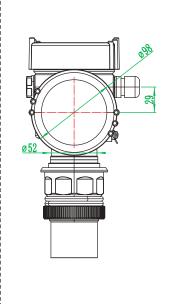
**Diagram of Level Measurement** 

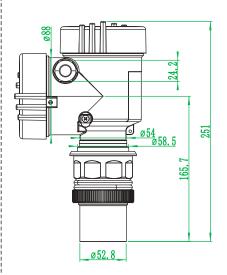


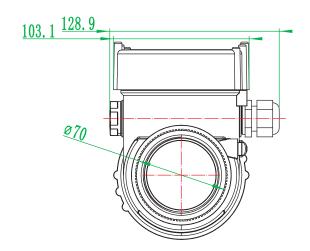


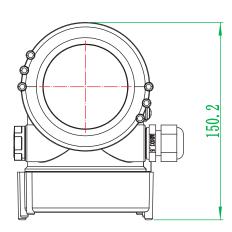
## **Dimensions**















## **Technical Specifications**

Level Range 4, 6, 8, 10, 12, 15, 20, 30M

Accuracy 0.5%-1.0%

Resolution 3mm or 0.1%

Display LCD Display

Output 4 -20mA (2 wire)/250Ω Load

**Connection** Thread

Power Supply 24 VDC (standard)

Ambient Temperature Transmitter: -20 - 60 °C, Sensor: -20-80 °C

Protection Grade Transmitter IP65, Sensor IP68

Probe ABS, PVC, PTFE
Transmitter Alluminium Alloy

Structure-Display Compact (standard), remote

Standard Cable 10m (Remote)

Explosion Proof For Diesel/Oil applications







**Remote Display** 

**Compact Integral Display** 

**LCD Display** 

**FACTORY** ADDRESS

**USA OFFICE ADDRESS** 

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