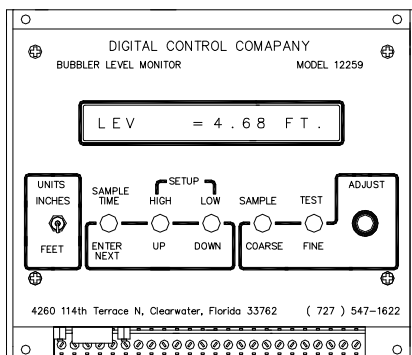




# Bubbler Level Monitor (BLM)

## Model Number: 12259 (U.L. Listed)

*Manufacturer of High Performance Instrumentation and Control Systems*



### Description:

The Bubbler Level Monitor (BLM) model 12259 is an automatic bubbler type level measurement and display unit that periodically samples the level of most liquids. It operates by forcing compressed air into a bubbler tube with its opening placed near the bottom of the liquid. The BLM measures the pressure required to force air through the tube and generates a 4-20 mA signal which is proportional to the depth of the liquid in addition to displaying the sampled level. The pressure in the bubbler tube is also monitored to detect significant changes in liquid level which may happen between samples. If a change is detected then a new sample is initiated to update the measured level. The unit uses field configurable software that is menu-driven to allow users to change the unit's sampling rate, offset, span, and level alarms without additional programming. The BLM also includes an SDI-12 interface for environmental data acquisition applications in addition to an RS-232 serial communications interface designed to support SCADA systems using a variety of Modbus based communication devices giving the system remote data acquisition, monitoring, and control capability.

### Applications:

- Wastewater Pump Station Levels
- Water and Wastewater Plant Tank Levels
- Liquid Level for Tank Monitoring
- Storm Water Levels
- Holding Pond Levels
- Groundwater and River Levels
- Landfill Liquids (Leachate) Levels
- Most Liquid Level Monitoring Applications Where Liquid is Vented to Atmosphere

### Features:

- 16 Character alpha-numeric liquid crystal display for easy reading and configuration.
- Displays level in feet and inches (Metric units also available).
- Ranges of 2, 11, and 34 feet available (standard).
- Ranges of up to 100 feet available (optional).
- Sampling rate, Offset, Span, and High and Low level alarms configurable with menu-driven operation.
- Manual sample request switch on front panel.
- Front panel test knob for simulated level input testing.
- 4-20 mA signal output proportional to level.
- System error, Low and High level relay outputs to detect alarms from remote site.
- High accuracy pressure transducer -  $\pm 0.25\%$  (optional).
- Rain gage input for optional tipping spoon type rain collector.
- 12 VDC input power operation makes it ideal for many battery and solar powered applications.
- System available in an optional enclosure.
- SDI-12 port to communicate with most data loggers.
- RS-232 serial port for SCADA communications support.
- Uses non-volatile memory allowing system to retain program software during power loss.
- Various specific gravities available to accurately measure most liquids.
- Proven software that allows for easy setup and reliability.
- Custom software available from factory.

### Specifications:

#### **Input Power:**

- 10 to 15 VDC, 2 A max.

#### **Operating Temperature Range:**

- -30°C to +60°C (-22°F to +140°F)

#### **Accuracy:**

- $\pm 1\%$  of full scale over temp range (higher accuracy available)

#### **Ranges:**

- 0 to 34 ft. standard (up to 100 ft. available)

#### **Inputs (Non-isolated):**

- 1 - Digital (rain gauge)
- 1 - Analog (4-20 mA external transducer)

#### **Relay Outputs:**

- System Error, High and Low Alarm - SPST Form A - 15 A at 125 VAC

#### **4-20 mA Current Loop Output:**

- Non-isolated transmitter
- Total compliance of 9 VDC

#### **Transient Protection:**

- Metal Oxide Varistor

#### **Interconnect:**

- Pluggable terminal blocks (screw type)
- DE-9 connector for RS-232 / SDI-12 Bus

#### **Communications Protocol:**

- Modbus ASCII / SDI-12

#### **External Dimensions:**

- 5.40"H x 6.40"W x 4.00"D

#### **UL File Number:**

- E201217



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