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WHEN MEASUREMENTS MATTER

LevelVUEB10
Water-Level Continuous Flow Bubbler with Integrated Screen

LevelVUE™B10
Water Level Bubbler

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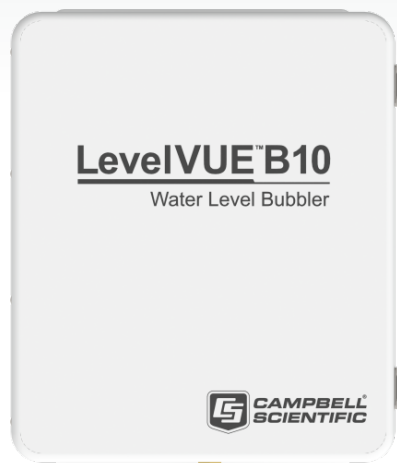
Compact, Easy-to-Use Water-Level Bubbler

Meets or exceeds USGS OSW requirements

Overview

The LevelVUE™B10 is a cost-effective, accurate, reliable solution for water-level measurements based on a non-submersible pressure transducer system. This type of sensor is a bubbler. Bubblers accurately measure the pressure it takes to create a continuous airflow in an airline submerged in water. The

LevelVUE™B10 is designed for ease of use while providing long-term performance and accuracy. With a built-in keypad and display, you can complete your setup and site visit tasks using the LevelVUE™B10. The LevelVUE™B10 interfaces with data loggers or other controllers using SDI-12 or Modbus.

Benefits and Features

❯ Low-power idle state for extended battery life

❯ Proprietary high-pressure/high-volume purge operation to prevent sediment buildup

❯ Simultaneous operation on the SDI-12 interface and Modbus interface

❯ Built-in keypad/display for full setup and maintenance operation

❯ Incorporated SDI-12 version 1.4 metadata commands for identification of data

❯ Standard cold temperature (-40°C) operation

❯ Proprietary air flow/bubble generation designed for years of trouble-free operation

Detailed Description

The LevelVUE™B10 bubbler incorporates all the components needed to be a self-contained, pressurized air-supply system. This bubbler has an industrial air compressor (-40° to +80°C), large air tank (0.8 L), and other components that replace the need for pressurized air tanks and manual valves found in the older continuous gas flow systems. The LevelVUE™B10 meters the airflow to create a constant flow in the orifice line regardless of the water depth above the outlet. Precision

sensors monitor the tank pressure and the line pressure to consistently maintain the same airflow. The precision sensor monitoring the pressure on the orifice line precisely detects the pressure required to push air through the line. This pressure value is directly related to water depth. Applying a simple conversion to the pressure value creates the value of water depth in feet, meters, or other units of measure.

For comprehensive details, visit: **www.campbellsci.com/levelvueb10**

Specifications

Operating Temperature Range	-40° to +60°C
Storage Temperature Range	-40° to +80°C
Relative Humidity	0 to 95% (non-condensing)
Accuracy	≤ 0.02% of full-scale output (FSO) over temperature range
Overpressure Rating	2 times the sensor pressure rating
Enclosure Material	Fiberglass
Enclosure Dimensions	28.89 x 33.66 x 13.34 cm (11.375 x 13.25 x 5.25 in.) external
Enclosure Weight	7.48 kg (16.5 lb)

Sensor Resolution for Range

0 to 10.54 m (34.6 ft)	±2.1 mm (0.007 ft) for 0 to 15 PSI
0 to 21 m (69.2 ft)	±4.26 mm (0.014 ft) for 0 to 30 PSI
0 to 35.16 m (115.35 ft)	±7.11 mm (0.023 ft) for 0 to 50 PSI

Airflow

Airflow Type	Microprocessor-controlled constant airflow over full pressure range and temperature
Bubble Rate	〉 30 to 120 bubbles per minute (programmable; based on 0.635 cm [0.25 in.] inner diameter outlet) 〉 60 bubbles per minute (default)
Manual Purge Operation	Immediate purge triggered via built-in keypad/display, SDI-12 command, or Modbus register
Purge Pressure	30 to 90 PSI (user-programmable)

Purge Activation	〉 Automated under program control using SDI-12 extended command or Modbus register 〉 Built-in keypad 〉 Scheduled from once a day to once every 30 days; 1-day resolution
Purge Sustain Time	0 to 30 s (programmable)
Pressure Inlet	1/8 in. female NPT
Orifice Line Outlet	1/8 in. female NPT

Power

Input Voltage Range	11.5 to 16.5 V
Current	〉 5 mA (standby) 〉 18 A (maximum startup surge) 〉 7 A (compressor active, typical) 〉 10 A (compressor active, maximum)

Communications

Output Options	SDI-12, RS-485
SDI-12 Protocol	SDI-12 V1.4 compliant
SDI-12 Default "M" Measurement Response Time	8 s
RS-485 Protocol	Modbus, 8 data bits, no parity, 1 stop bit
RS-485 Baud Rate	9600
Keypad/Display Description	〉 8-line by 20-character OLED graphical display 〉 Application-specific menu provides complete system setup. 〉 Operational over the entire temperature range.

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