

# AMAZON BUBBLER

BUBBLER/PRESSURE SENSOR

Designed with simplicity in mind, the Amazon bubbler is the ideal system for long-term, water level monitoring sites. It can be used as a stand-alone system with internal data storage, or as a sensor connected to any manufacturers data logger. Easily configure and collect data using the browser-based graphical user interface with all standard web browsers on PCs, tablets and smart phones. It's rugged build, and technologically advanced system makes the Amazon Bubbler an attractive solution for real-time monitoring and data collection.

The Amazon provides a continuous air bubble and an integrated pressure sensor that measures the pressure required to push the bubble out of the orifice line, which is the line pressure. The line pressure value measured in psi is then converted into the desired units of measurement to represent water level.


Amazon Bubbler

*shown with optional display

## APPLICATIONS

Accurately measure stream, lakes, wells, ocean and waste water levels.

## KEY FEATURES

- Advanced rugged design
- High accuracy 0.02% FS
- "Powered by Storm" technology:
  - W-Fi Connection Interface
  - Storm Central Connectivity
  - Browser based software
- Range options:
  - 0 to 10.5 m (34.6 ft)
  - 0 to 21 m (69.2 ft. )
  - 0 to 35 m (115 ft. )
- Multiple output and connection options (SDI-12, Modbus, 4-20 mA, USB, Ethernet)
- Optional low-powered display for complete system configuration and data display.

YSI

a xylem brand

# SPECIFICATIONS

| PERFORMANCE | | | |
|---|---|---|---|
| Accuracy | Pressure | Less than or equal to 0.02% of full scale output (FSO) over temperature range | |
| Range | Pressure | Depth | Accuracy |
| | 0 to 15 PSI | 0 to 10.54 m (34.6 ft) | ±2.1 mm (0.007 ft) |
| | 0 to 30 PSI | 0 to 21 m (69.20 ft) | ±4.3 mm (0.014 ft) |
| | 0 to 50 PSI | 0 to 35.15 m (115.34 ft) | ±7.11mm (0.02333 ft) |
| Bubbler Gas Delivery | Microprocessor controlled unit | | |
| | Gas Flow Technology | Constant mass Technology | |
| | Gas Flow Control | Bubble rate is user programmable from 30 to 120 bubbles per minute based on 6.35 mm (1/4 in.) tubing. | |
| Purge Functions | Purge Pressure Level | User Selectable 40 PSI to 90 PSI | |
| | Options | • Manual<br>• SDI driven purge<br>• Purge sustain option (10 to 30 sec)<br>• Automatic/programmable | |
| Compressor | Type | Piston Compressor | |
| | Operation | Low duty cycle (15 hours typical runtime per year at 60 bubbles per minute into 3.7 m (12 ft.) (purges not included) | |
| General | Pressure Overload | Up to 2 times the rated pressure | |
| | Media Capability | Non-corrosive dry gases only | |
| | Rating | NEMA 4 enclosure | |
| **MECHANICAL / POWER** | | | |
| Size | Housing | 311.15 mm L x 222.25 mm W x 146.05 mm H (12.25 in. L x 8.75 in. W x 5.75 in. H) | |
| Weight | Housing | 5.44kg (12.0 lbs) | |
| Material | Housing | Aluminum | |
| | Atmospheric Vent | Sintered bronze, #10-32 | |
| Power Requirements | Voltage Input | 10.0 to 16.5 V DC | |
| | Current | Standby: 6mA | |
| | | Compressor Active, No Pressure: 3 A | |
| | | Compressor Active, Full Pressure: 6 A | |
| | | Startup Surge Required: 15 A | |
| | | Based on a 60 bubbles/min flow rate with a 15 min measurement cycle and a 1 purge/day frequency. Average active current 20mA | |
| | Surge Protection | 20 V DC | |
| Connection | Quick Connect Phoenix Connectors | 2-position quick connect for power | |
| | | 5-position quick connect for SDI-12, 4 to 20mA, and RS-485 | |
| | Pressure Inlet | 3.82 cm (1/8 in) female NPT | |
| **COMMUNICATION** | | | |
| SDI-12 | Baud Rate | 1200 | |
| | Protocol | SDI-12 V1.3, 7-bit even parity, 1 stop bit | |
| | Output Voltage Levels | Minimum high level: 3.5 volts<br>Maximum low Low: 0.8 volts | |
| | Response Time | 8-second measurement sequence (programmable) | |
| RS-485 | Baud Rate | Programmable (default = 9600) | |
| | Protocol | Modbus RTU | |
| 4-20mA Output | Type | 4-20mA, optically isolated | |
| | Loop Voltage | 8.0V min, 35V max | |
| | Resolution | ±0.24 uA (16-bit DAC) | |
| | Accuracy | 0.075% max error | |
| **ENVIRONMENTAL** | | | |
| General | Operating Temperature | -40° to +60° C | |
| | Compensated Range | -40° to +60° C | |
| | Storage Temperature | -60° to + 80° C | |
| **MISCELLANEOUS** | | | |
| Warranty | The Amazon Bubbler is warranted against defects in materials and workmanship for two years from date of shipment. | | |
| Note | Specifications subject to change without prior notice due to on going commitment to product testing and improvement. LR May 2016 (D59-06 0516)<br><br>*Cell modem currently under development. | | |


xylem
Let's Solve Water

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