"THE WELL BUBBLER"
Compressed Air Well Level Sensor

About

The Well Bubbler forces compressed air through a tube installed in the well to accurately measure the standing and pumping well levels - the same approach used by well drillers and pump installers. The well level is automatically calculated from the length of the tube and the air pressure, and is shown on the display in feet.

Benefits

The Well Bubbler was developed after years of struggling with hydrostatic, "pressure-type", and acoustic well level sensors. Submersible pump motor wiring and tight clearances cause hydrostatic sensors to snag during installation. Tubine pump motors drip oil into the well, clogging and fouling the sensor. The pump can be damaged by "swallowing" the sensor body and wiring. VFD noise can make pressure-type sensors unreadable, while engine noise and splashing water affect the accuracy of acoustic sensors.

The Well Bubbler can be safely installed with all pump and motor types - it is not affected by oil in the well, VFD noise, or engine noise. In many cases, an air line is already installed in the well, for a truly "plug-and-play" installation.

Features

Cellular data reporting and text alerts
Record flow rate - compatible with pulse-type and 4-20mA flow meters
Record pump power & pressure - use standard 4-20mA transducers
Integrated solar power - no wiring, assembly or AC power required
LCD display - visible in bright sunlight, backlight for night-time visibility
Relay output - stop the pump when well level is low, restart delay option
Secure data logger - view and download well level & flow history
Telemetry output - 4 to 20mA and 0 to 5Vdc for most telemetry systems & SCADA
Compatibility - use with standard, 1/4" diameter air tubing
External power input - for use with remote solar panels or AC power
External power output - used to power flow meters

PACIFIC COAST ENGINEERING

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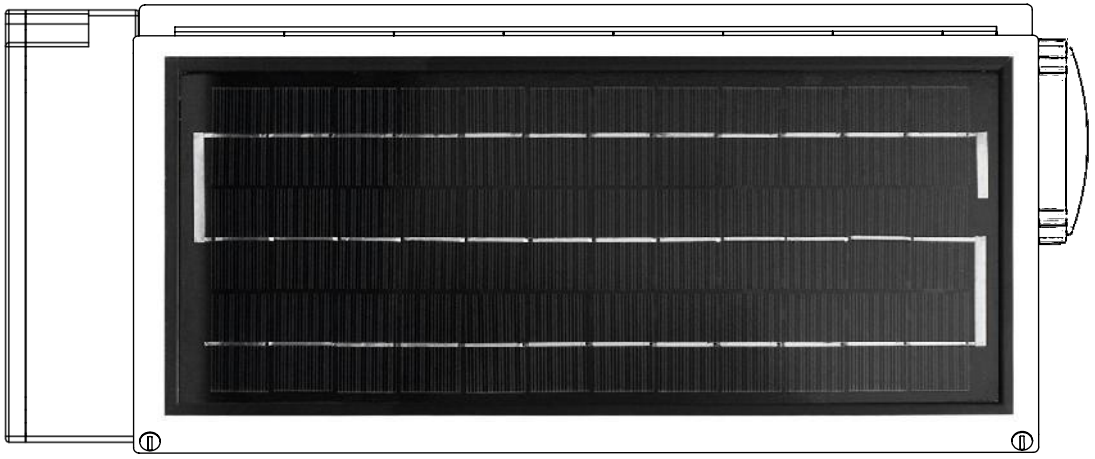
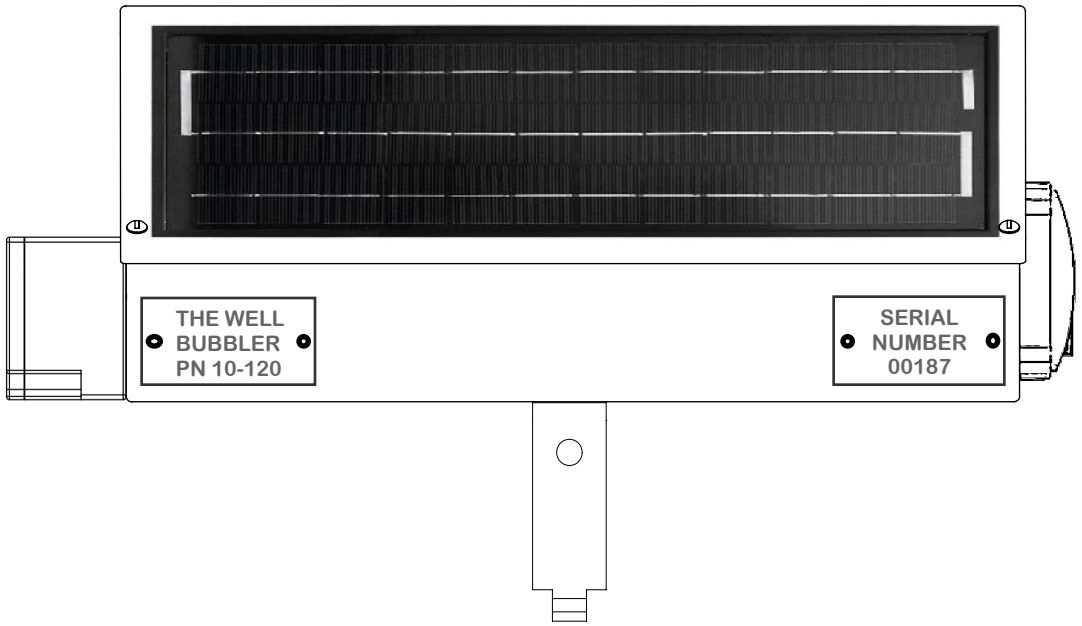
http://www.thewellbubbler.com

Information in this drawing is provided for reference only.

Compressed Air Well Level Sensor
Pump Controller, Data Logger





SPECIFICATIONS

Mechanical

14-ga Steel enclosure, NEMA 12 and IP65
External dimensions: 19 1/4" x 7 1/2" x 7" (W x D x H)
Weight: 25 lbs
Mounting: Strut channel, 1-5/8
Air tube compatibilty: 1/4" OD, push to connect

Electrical

Maximum operating pressure: 150 psi
Measurement range (SWL - PWL): 350 ft
Accuracy: +/- 0.25% at 77F (25C)
Total error band: +/- 1.0% over entire temperature range
Operating temperature range: 5F to 131F (-15C to 55C)
Sample rate: 5 min max, 15 min typ
Telemetry output: 0-5 Vdc, 4-20 mA (isolated), 10-bit
Flow meter input: pulse type, 0.1Hz-100Hz, 12Vdc
Discharge pressure input: 12Vdc, 4-20mA transducer
Pump current input: 12Vdc, 4-20mA transducer
Pump control relay: 5A @ 120Vac, SPST
External power input: 1A @ 18-24Vdc
External power output: 0.25A @ 12Vdc

Data / Communication

Data logger capacity: 1MB or 65,546 data points
Storage: ~2 years at 15 min sample rate
Cellular communication (optional): Verizon LTE-M

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