The levelpro 6100 advanced liquid level sensor is ideally suited to accurately measure pressure in gas bubbler systems used for water level determination. For process industry applications where instrumentation cannot be in contact with the liquid, the 6100 can be used remotely from the liquid being measured and features a level to volume conversion for typical container shapes. Pressure measured by the 6100 is converted to water/liquid level, or tank volume. Featuring micro-processor controlled, state of the art electronics, the 6100 delivers excellent precision and stability and offers simultaneous analogue and digital outputs for direct, easy connection to most popular input devices including loggers, PLCs and RTUs.

The levelpro is housed in an attractive machined plastic enclosure and is sealed to IP67 and NEMA 6 standards. The multi-line LCD display allows easy configuration of the sensor and shows current readings. Sensors are supplied with power, signal cables and comprehensive user manual.
TECHNICAL SPECIFICATIONS

Range: 10, 20, 35, 70 meters freshwater. non standard ranges available

Accuracy:
Digital output (Display, RS232, SDI-12)
Linearity: ± 0.05% of FS
Temperature: ± 0.001% per °C
Repeatability: <0.05% of FS/year
Analogue output: ± 0.15% over 0°C to +50°C

Resolution:
Analogue: 12 bit
Digital: 16 bit
Display: 0.1mm water

Units: kPa, psi, feet, inches, meters, centimeters, flow and volume units based on above

Temperature range: Operating: 0°C to + 50°C

Response Time:
From standby: 0.25s to full accuracy
From power-up: 1 second to full accuracy

Type:
Piezo resistive pressure sensor vented to atmosphere (gauge type)

Output Options:
Analogue: - 4-20mA current, 3 wire loop (up to 600 ohm load @12Vdc)
- 0-1 Volt or 0-2.5 Volt
Digital: - SDI-12 data
- RS232C data
Simultaneous digital and analogue output

Tube Connection:
¼” BSP female fitting as standard with a selection of tube fittings available

Power Supply:
12 Volts DC unregulated
Standby: <10mA
Active: <120mA plus current loop (backlight on)
<25mA plus current loop (backlight off)

Surge Protection: Inputs / outputs protected against transients by a secondary protection circuit that can absorb up to 1.5kW for 1ms

Enclosure: IP67 rated machined delrin plastic

Display:
4 line x 20 character LCD (7 x 5 dot matrix) with Backlight, extended temperature range

Weight: 0.85 kg

OPERATING PRINCIPLE
The 6100 levelpro determines water / liquid level by measuring backpressure of a gas bubbler system. A low cost plastic tube is submersed in the fluid to be measured and purged with inert gas. The pressure of the ‘head’ of water above the tube orifice is the same as can be measured up at the ‘dry’ end where the pressure is measured and converted to head of liquid. The key advantage of this technique of level measurement is that the electronics are remote from the fluid, ensuring long term reliability, low risk and reliability.

DIMENSIONS

Dimensions in mm