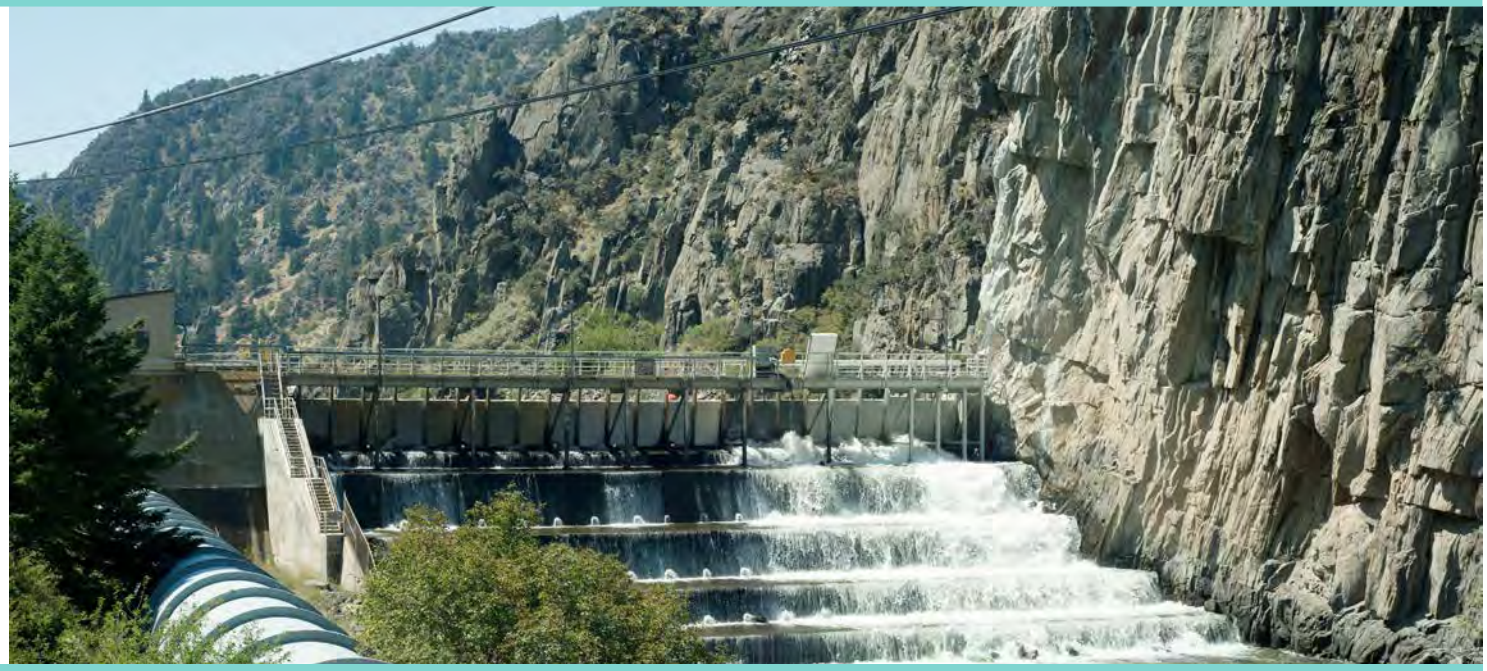
PR-7200

Advanced Liquid Level Sensor



APPLICATIONS

- River, irrigation, channel water level & discharge monitoring
- Groundwater level and landfill monitoring
- Dam, tank and reservoir levels
- Tidal monitoring
- Waste water monitoring
- Flood warning systems
- Process industry liquid level

FEATURES

- O H & S - Benefits for safe water level measurement
- No need for external gas cylinder Accuracy better than +/- 0-05% of full scale
- Excellent temperature stability
- Fully self contained precision piston air compressor
- Simultaneous analogue or digital data output
- Integrated LCD display and keypad
- Ranges 0-5m to 0-70m
- Stage/discharge & stage/volume conversion
- Over-pressure protection
- 3 Year Warranty
- Low cost of ownership
- Fully serviceable - fixed price

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MADE IN AUSTRALIA

bsi. ISO 9001 Quality Management

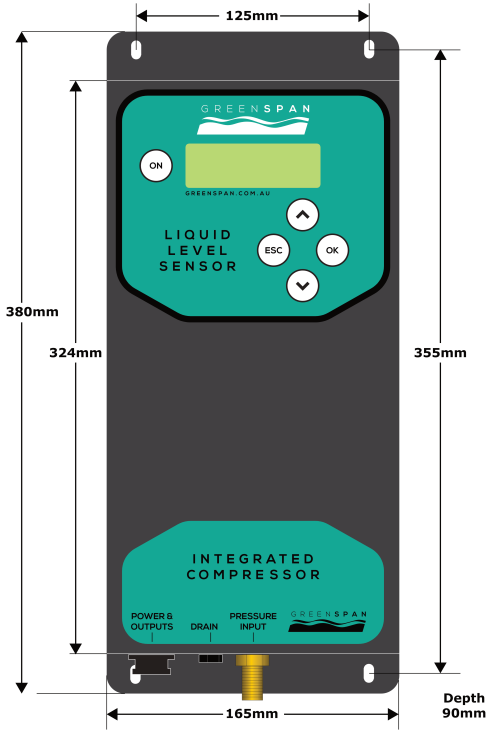
TECHNICAL SPECIFICATIONS

RANGE	10, 20, 35, 70 meters freshwater (15, 30, 50 and 100psi) -non standard ranges are available
UNITS	kPa, psi, feet, inches, meters, centimeters, flow and volume units based on above
ACCURACY	Digital output (Display, RS232, SDI-12): Linearity: +/-0.05% of FS Temperature: +/-0.001% per °C Repeatability: +/-0.01% of FS Long term drift: <0.05% of FS/year Analogue output: +/-0.15% over 0°C to + 50°C
RESOLUTION	Analogue: 12 bit Digital: 16 bit Display m – 3 D.P. (eg. 2.345m) mm – 0 D.P. (eg. 2345mm) ft - 2 D.P. (eg. 7.69ft) in - 1 D.P. (eg. 92.3in) p.s.i. - 3 D.P. (eg. 3.518psi) kPa - 3 D.P. (eg. 5.025kPa)
TEMPERATURE	Operating range: -10°C to + 55°C
RESPONSE TIME	30 seconds (default) measurement sequence from standby Immediate if using *Continuous Run Mode*
TYPE	Piezo resistive differential pressure sensor (one side vented to atmosphere)
OUTPUT OPTIONS	Analogue: 4-20mA current, 3 wire loop (up to 450 ohm load @12Vdc) Digital: SDI-12 data protocol version 1.3 RS232C data Simultaneous digital and analogue output
TUBE CONNECTION	¼" tube brass fitting with 3/8" tube adapter standard with a selection of other tube fittings available
POWER SUPPLY	12Vdc, 16A compressor supply – use battery and charger. PR-7100 sensor uses same supply Standby @12V: <10 mA Active @12V: <120mA backlight on* <25mA backlight off* *plus current loop if used
SURGE PROTECTION	Inputs/ outputs protected against Transients by a secondary protection circuit that can absorb up to 1.5kW for 1ms
ENCLOSURE	IP67 rated
DISPLAY	4 line x 20 character LCD (7 x 5 dot matrix) with backlight, extended temperature range
WEIGHT	4.2kg PR-7200 only 5.3kg shipping weight

OPERATION PRINCIPLE

Water or liquid levels are determined by measuring hydrostatic backpressure in a bubbler system. A low cost plastic tube is submersed in the fluid to be measured and purged with 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 and low risk during flood events in rivers and streams or level measurement of volatile liquids. The PR-7200 pumppro provides a purge of compressed air into the tube just before a reading is taken. When activated by the host system (or manually using the keypad), the internal compressor will purge air into the line for several seconds. Following a settling time (to allow the surplus air to escape the tube end), a static pressure condition is achieved. The PR-7200 takes a pressure and temperature reading and applies a correction algorithm to produce an accurate pressure or water level measurement on the display or to the host system.

DIMENSIONS (mm)



The PR-7200 combines an integrated air compressor module and PR-7100 advanced liquid level sensor to form a fully self contained hydrostatic pressure sensor designed to measure water and liquid levels reliably and accurately. The internal compressor means that no external gas cylinder is required. Featuring a Teflon lubricated precision piston air compressor, the PR-7200 contains all other components required for self generation of compressed air. The PR-7200 is a stand alone instrument that does not require compressed gas bottles, regulators or ancillary pneumatic items.

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