

DRY PRESSURE TRANSDUCER MODEL WL3100/WL3100A



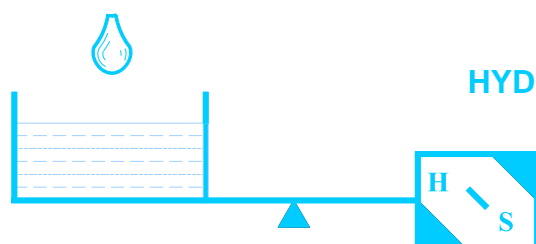
*Dry Pressure Transducer
Model WL3100/WL3100A*

- High Accuracy $\pm 0.02\%$ F.S
- Output Signal
 - 4-20mA, SDI-12, RS232
- Programmable LCD
 - Time, date, level
- Digitally Compensated for non-linearity and Temperature
- User Select Imperial or Metric.
- Individual Calibration Certificate
- Digitises output signal
- Robust construction
- Backlight Powered Via SDI-12 Connection
- Lithium battery backup

ISO
9001

QUALITY SYSTEM
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HYDROLOGICAL SERVICES PTY.LTD



HYDROLOGICAL INSTRUMENTS & EQUIPMENTS
DESIGNED AND MANUFACTURED
BY HYDROLOGISTS

DESCRIPTION

The Hydrological Services WL 3100 and WL3100A are our latest generation of dry pressure transducers. They incorporate Hydrological Services latest technical innovations.

The unit consists of a strain-gauge bridge sensing element fitted inside a rugged aluminium housing.

The SDI-12 or RS232 outputs allows multiple connection to a single data logging recorder, transmitting at 1200 baud over distance up to 60 metres (200 ft).

This unit also provides a 4-20 mA output as an alternative signal output if SDI-12 or RS232 are not required.

The signal can be viewed via the LCD display showing range, time, date and current water level.

The operating range of the 4-20 mA current loop is user selectable.

Both the WL3100 and the WL3100A measure pressure, which is related to the water level through a user factor. To obtain the stated accuracy, this user factor must be changed slightly depending upon the site location on earth as well as a few other parameters. In the WL3100, the user factor must be determined by the operator, however the WL3100A can calculate the factor for you by simply entering the latitude, altitude, instrument height above the orifice and average water temperature. All values are entered using the LCD and push buttons. (The WL3100A also has a wider operating temperature range)



Figure: WL3100 Dry Pressure Transducer

INTERFACES

The WL3100 or WL3100A dry pressure transducer, when used in conjunction with an Hydrological Services Dry Bubble Unit, Model HS-23 or the HS-55 Compressor Unit, allows the measurement of water head to a high degree of accuracy and repeatability with the instrument up to 500 metres away from the river (refer to bulletin 2A and 2).

SPECIFICATIONS

Enclosure:	Aluminium diecast weatherproof enclosure IP65
Dimensions:	180 x 105 x 100 mm
Weight:	1.2 kg
Isolation Diaphragm	316 Stainless Steel
Operating range:	0-5, 0-10, 0-15 , 0-20, 0-30 metres water head (Imperial units also available up to 100 feet range).
Over pressure:	2.67 x ranges
Operating Temperature:	
WL3100A	-40 °C to +70°C (-40 °F to +176 °F) (Excluding LCD Display)
WL3100	-20 °C to +70°C (-4 °F to +176 °F) (Excluding LCD Display)
Humidity:	100% non-condensing
Operating Voltage:	9.6 to 16 VDC via SDI-12 port
Current Loop Operating Voltage:	9 to 30 VDC
Output:	4-20mA (optically isolated to 2000 VDC or AC peak), SDI-12 and RS232
Accuracy & Linearity:	±0.02% of F.S. Referenced to a best fit straight line
Long Term Stability:	Typically ±0.05 % F.S./annum
Pressure Connection:	1/4" Tube
Sensor Vent:	Sintered Filter
Calibration:	Over full range against water head.
Insulation:	Greater than 100MΩ at 500 V DC

LCD Display Specifications:

Screen:	2 lines x 16 characters LCD
Backlight	Powered via SDI-12 port (9.6 to 16 VDC)
Display:	range, resolution, time, date and Level reading.
Parameters:	User selectable via push buttons on the pressure transducer housing

Note: Specifications are subject to change at anytime without notice.

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