BAROMETRIC PRESSURE SENSOR

(BP50 Series)

Features

- High quality low power electronics
- Fully calibrated and compensated
- Frequency output
- Sealed housing with weather proof vent
- MEMS element (micro-electromechanical systems)

Applications

- General meteorology
- Applied meteorology
- Environmental studies
- Scientific research
- Atmospheric pressure corrections and compensations

The BP50 Series Barometric Pressure sensors are designed to measure atmospheric pressure in the range 800 to 1100 hecto-Pascals (hPa). The sensors use an MEMS (micro-electromechanical systems) element that has been laser trimmed for accuracy. This provides a highly accurate and stable sensor at a reasonable cost.

The housing is fully sealed to protect the electronics from the weather, and includes a Gortex vent that allows the pressure changes to be detected without allowing moisture into the sensor electronics.

A two point factory calibration ensures high accuracy over the operating range.

BAROMETRIC PRESSURE SENSOR
SPECIFICATIONS

Model
BP50

Cable Type
3-core shielded

Measurement Units
hPa or mBar or kPa

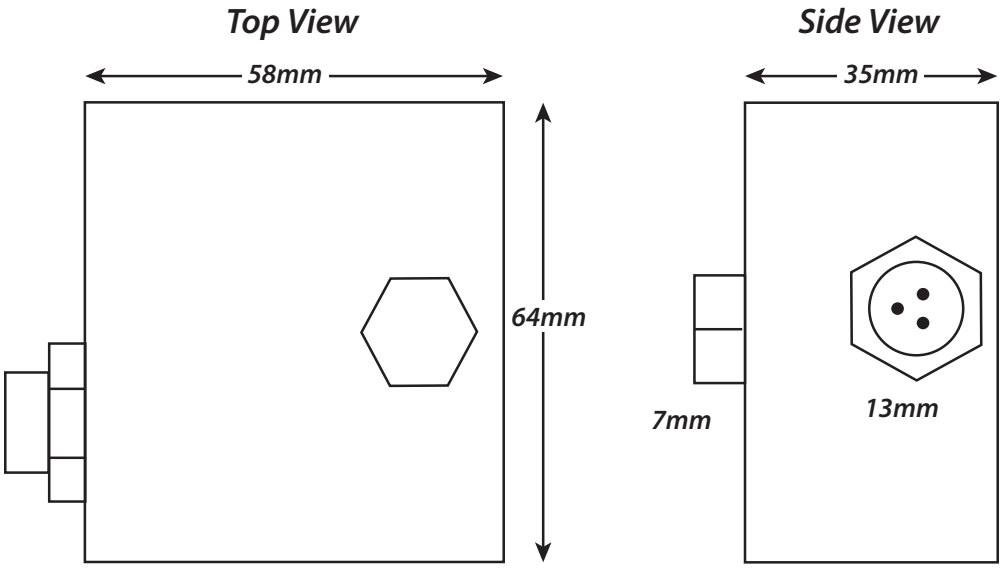
Operating Range
800 to 1100 hPa

Resolution
0.1 hPa

Overall Accuracy
±0.5 hPa

Sensing Element
MEMS (micro-electromechanical systems)

BP50 Barometric Pressure Sensor Dimensions



Temperature Drift
Typically ±0.3 hPa over 80°C

Temperature range; -10°C to +70°C

Calibration Method
Two point calibration

Linearity Error
Better than 0.1 hPa for operating range

Long Term Stability
Less than +/- 0.2 hPa drift per annum

Reliability
Typically five (5) years operation before factory recalibration recommended.

Housing
IP66 housing

Operating Conditions

Temperature:	-10°C to +70°C
Humidity:	0% to 100%

Supply Voltage
5.5 to 15 Volts DC

Current Drain
<2.0 mA at 12V DC

Output
- +5 Volt square wave frequency
- Linearly proportional across 300 hPa range
- 10Hz = 800 hPa
- 70Hz = 1100 hPa
- Above 10Hz (800 hPa); + 0.2Hz = + 1hPa
- 3 pin male Conxall socket

Sensor Mounting
The sensor is normally housed in the LH35 weather station cabinet. Housing must be vented to atmosphere, but provide a 'static pressure' environment to remove pressure effects of wind over the sensor aperture.

Options
FX1M5 - 1.5m cable required

Environdata
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