

Digital Pressure Gauge



Qteq's Digital Pressure and Temperature Gauge is used to monitor water levels in aquifers and for hydrocarbon reservoir surveillance applications. The pressure gauge employs a monocrystalline silicon piezo-resistive sensor, with a Wheatstone bridge etched into the silicon substrate. This results in excellent long-term stability characteristics and optimises sensor sensitivity. Two types of system architecture are available, one for single end-point monitoring applications and the other enabling multiple gauges to be connected to a common downhole Tubing Encapsulated Cable (TEC).



Features and Benefits

- The gauge is a fully welded assembly.
- The cable head design provides a metal-to-metal seal with the downhole TEC.
- The gauge transducer features a 24-bit A-D converter with digitally encoded high resolution pressure and temperature data transmitted to surface with no loss of fidelity.
- Excellent sensor stability for long-term monitoring applications.

Specifications

	Type D-GP
Sensor Type	Piezo Resistive
Measurements	Pressure and Temperature
Signal Modulation Type	Digital Phase Shift-Key
Pressure Range	300, 500, 1000, 1500, 3000, 5000, 6000, 10000 psi
Pressure Accuracy	+/- 0.025% full scale
Pressure Resolution	0.0003% full scale
Pressure Drift	0.1 psi/month
Temperature Range	105 °C
Temperature Accuracy	± 0.5 °C
Temperature Resolution	0.01 °C at 1 second
Sampling Frequency	Minimum 1 second
Long term vibration resiliency	8g at 120 Hz
Material	316L stainless steel, Inconel 718, Inconel 825
TEC Connection Seals	Primary & secondary metal-to-metal
Outside Diameter	22.2 mm
Length	257 mm including single cable head (end-point architecture) 431 mm including dual cable heads (multi-drop architecture)
Cable Head Pressure Test	Yes, up to 2,000psi
Options	Up to 10x multi-drop gauges on a single TEC
Certification	IEC 61326