

The Photon Control Downhole Pressure and Temperature Sensor is designed to meet the demanding needs of the Steam Assisted Gravity Drainage (SAGD) process required to efficiently extract the bitumen from oil sands projects.

Description

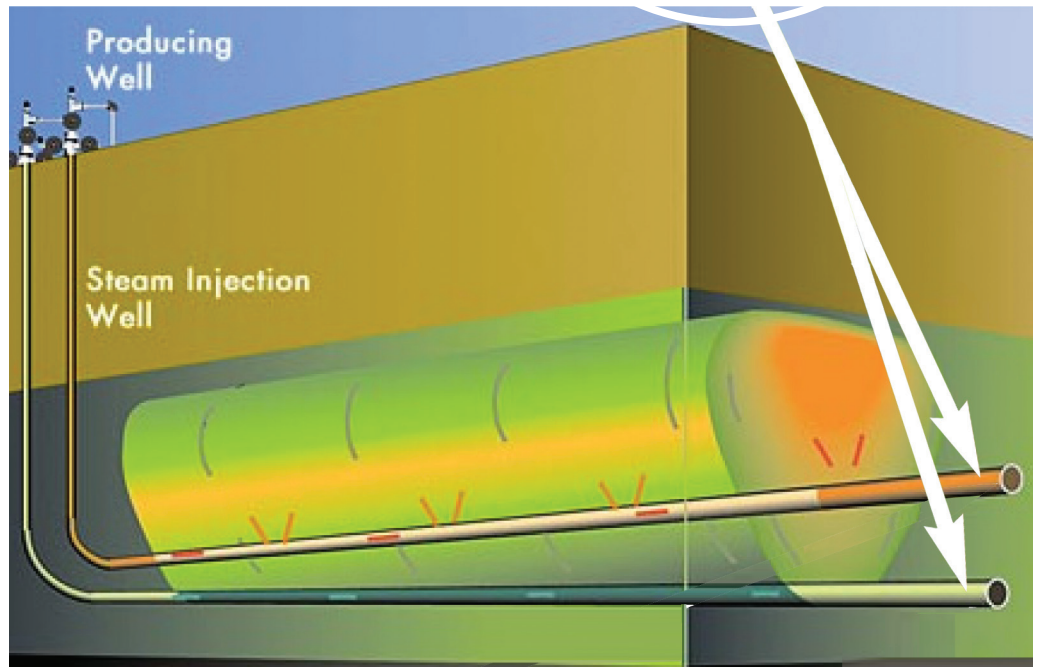
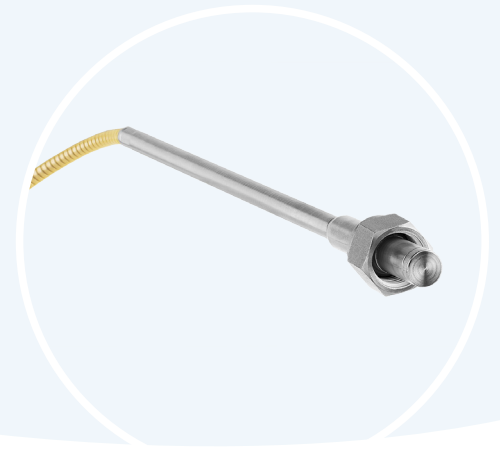
Major Oil and Gas companies are investing significant dollars in developing oil sand resources in Northern Alberta. One method that is of particular interest, is a technique referred to as Steam Assisted Gravity Drainage (SAGD). The temperature and pressure of the steam required to efficiently extract the bitumen, in a SAGD process, are considerable. The temperature can be as high as 300°C with pressures exceeding 100 MPa.

The ability to accurately measure these process variables during production is extremely important for process optimization and can help reduce overall production costs.

Traditional sensors are prone to failure as a result of material limitations and high levels of thermally induced noise.

The Photon Control Downhole Pressure and Temperature Sensor is designed to meet the demanding needs of the SAGD process. The sensing elements are hermetically sealed within a stainless steel probe and are resistant to Hydrogen attack.

The probe is connected to the interface electronics with optical fibres, housed within a stainless steel cable. The cable can be up to 5000 m in length.



Highlights:

- *Designed for SAGD Operations*
- *High Pressure and Temperature Range*
- *Hydrogen resistant design*
- *Scalable for multi-point measurement applications*
- *Available up to 5000 m in length*
- *High Accuracy*

Performance Specifications

Accuracy	Temperature:1% FS Pressure:1% FS
Resolution	0.05 % FS
Maximum Fiber Optic Cable Length	5000 m

Operating Specifications

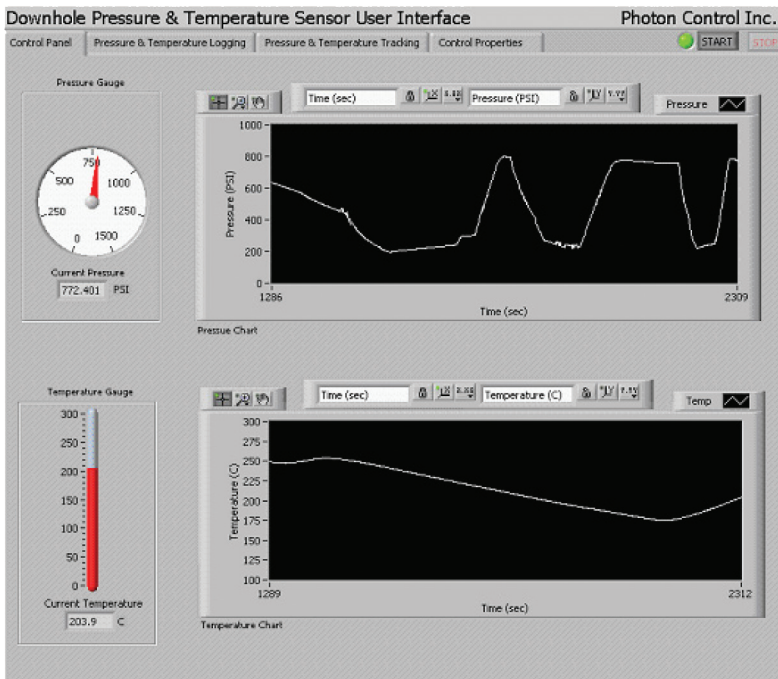
Pressure Range	0 to 100 MPa
Temperature Range	0 to 300 °C

**Custom Pressure and Temperature ranges available

Electrical Specifications

Power Supply Voltage	12 to 30 VDC
Power Consumption	600 mA @ 24 VDC
Operating Temperature	- 40 °C to 50 °C
Sampling Rate	10 Hz
Analog Output	4 - 20 mA
Digital Output	Modbus RTU
Spectral multiplexer Configuration	8,16 channels

User Interface Diagram



Spectral Multiplexer

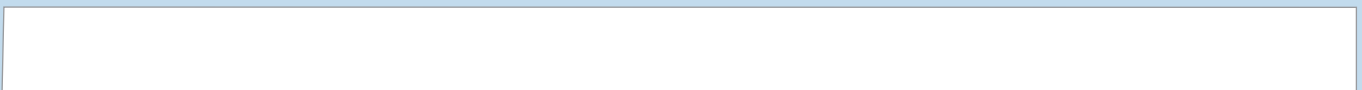


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DISTRIBUTED BY:



WARRANTY: All Photon Control Temperature Sensor Products (converters and probes) come with a 1-year warranty. Some limitations apply, please contact us for more details.

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Specifications subject to change without notice.