



ONE SOLUTION PLATFORM FOR YOUR OIL & GAS SENSING APPLICATIONS

LxIQ™ OPT Well Pressure Monitoring

LxIQ™ 1/4 inch Cable for Integrated Pressure and Multi-Point Temperature Measurements

LxDATA is an Oil and Gas technology company providing well monitoring systems and services. LxDATA leverages a unique optical sensing technology to provide reliable well monitoring solutions and high quality data.

At LxDATA, we provide proven and reliable photonic solutions that assist reservoir and production engineering teams acquire critical sub-surface data and provide valuable information to better understand the sub-surface and the associated uncertainty. With dynamic real-time reservoir monitoring information can be extracted and can be used as critical input into reservoir exploration and management decisions.

LxDATA LxIQ™ P/T Gauge

The LxDATA fiber optic pressure-temperature OPT gauge provides a step change in reliability and performance in the measurement of pressure and temperature in harsh down-hole environments.



The 1/4 inch profile allows for the potential reduction of guide or CT string diameters to the minimum diameter. Due to its small diameter, deployment in multi-cable / multi-pressure point configurations is also possible without creating significant tubing blockages. The sleek profile has also been optimized to limit downhole snagging, ensuring easy insertion and retrieval and to limit potential gauge clogging.

The complete and seamless integration of the LxDATA OPT gauge with the LxDATA OTC temperature point cable provides a single multi-parameter, multi point sensing solution for critical down hole operation. This unique system can be reliably installed and can provide long term accurate, synchronized high resolution data. Since all this downhole data is collected on a single fiber, via a single ended cable, only one well head exit is required.



By using multiple factory calibrated miniature optical sensing elements inside the P/T gauge, accurate temperature compensated pressure and temperature The customer benefits from calibrated compensated and validated Pressure and Temperature data from the well to the desktop.

LxIQ™ for ESP Monitoring

Electrical submersible pumps (ESP) continue to prove their operation at elevated temperatures. Several innovations in pump design have extended the operating range of these pumps to nearly 300°C, opening up new applications especially in high temperature SAGD. In order to get optimum performance from these pumps it is important to monitor their operation. Key measurements allow operators to obtain advanced notification of potential problems and make the necessary adjustments for avoiding catastrophic failure. Parameters such as pressure and temperature can be used to assess the need for motor speed or back pressure adjustments.

The LxIQ™ ESP monitoring system includes point pressure/temperature gauges designed for measuring the pressure and temperature of the ESP in real time.

The LxIQ™ system being proposed can be leveraged in the future (i.e.; same data acquisition unit and instrumentation cabinet) for monitoring of ESP pumps.

The LxIQ™ Pressure-Temperature (OPT) monitoring solution can help maximize run life and production simultaneously while ensuring the most economic benefits from an ESP operation. The LxIQ™ Pressure-Temperature (OPT) product measures pressure and temperature at the pump intake using optical downhole monitoring technology which allows the thorough diagnosis of the wellbore pressure response due to the effects of the ESP system.

LxIQ™ One Platform for Pressure and Temperature : Feature and Benefits

The LxIQ™ solution has been designed to simplify and cost-reduce the operations environment associated with instrumenting SAGD wells. Through one integrated platform, LxIQ™ gathers real time synchronized and correlated pressure and multi-point temperature measurements for all Pad applications. The LxIQ™ solution uses one data acquisition unit housed at a customer designated MCC room to monitor both temperature and pressure for applications such as **Horizontal Producer and Injector well monitoring, ESP pump monitoring, and Observation well monitoring.** Through an optimized PAD level architecture, the customer can achieve flexibility in his downhole instrumentation decisions. Integrated fiber optic based Temperature and Pressure Sensing cables can be designed and deployed when and where required in a plug and play fashion. All downhole sensors use the same technology for temperature and pressure and are monitored by one system that easily connects to the customer DCS. All this serves to minimize downhole space and MCC room requirements, while dramatically reducing over-all operational costs associated with instrumentation.

All these features combine to create a thermal and pressure monitoring solution that goes beyond distributed sensing architecture to a more powerful pad-level architecture, one that integrates into one central interrogation and processing unit, a full suite of horizontal/vertical/specialist sensing strings to deliver a real-time, pad level representation of the thermal environment. This creates new possibilities in advanced imaging, reservoir modeling, and ultimately process optimization.

LXDATA

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