Weatherford®

Production Optimization

mPOD™3 Multi-point Digital Gauge

Vibration/Pressure/Temperature

The *mPOD*^{3} gauge transmits a proprietary protocol when addressed. Using an addressable scheme allows for multiple gauges or combinations of *mPOD*^{3} and *mPOD*$^{2+}$ gauges to be powered and communicate on the same, single-conductor cable.

Vibration data measured consists of G_{RMS} and frequency. The vibration parameter of in-well performance can assist in the diagnostics and proactive decision process with tubing wear or rod parts. In addition to rod-pumped wells, gas-lift wells may benefit from the *mPOD*^{3} gauge's enhanced measurement capability to understand flow induced vibrations on the production string and when specific valves are opened.

Applications

- Artificial-lift monitoring, intake and discharge pressure and temperature
- Pressure/temperature (P/T) applications and reservoir pressure monitoring
- Vibration monitoring

Features, Advantages and Benefits

- Multiple gauge communication on single-conductor line
- Metal-to-metal mechanical seals
- Designed for permanent applications

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Specifications

General					
Overall length with cablehead, in. (*cm*)	26 *(66)*				
Weight, lb. (*kg*)	2.8 *(1.27)*				
Diameter, in. (*mm*)	1.0 *(25.4)*				
Mechanical seals	Metal-to-metal				
Maximum *mPOD*^{3} or combination of *mPOD*$^{2+}$ and *mPOD*^{3} gauges on a single-conductor cable	6				
Drift	Typically <2 psi/yr				
Cable length, ft. (*m*)	Unlimited, compliance test @ 20,000 *(6096)*				
Sensitivity	Equal to resolution (calibrated repeatability)				
Power consumption	54 mA				
Temperature					
Gauge type	Integral to pressure				
Range, °F (°*C*)	59 to 257 *(15 to 125)*				
Accuracy, °F (°*C*)	±1.8 *(±1.0)*				
Resolution, °F (°*C*)	0.1 *(0.055)*				
Pressure					
Gauge type	Piezo resistive, silicon-on-insulator (SOI)				
Range, psi *(bar)*	0 to 1500 *(0 to 103.4)*	0 to 3000 *(0 to 206.8)*	0 to 5000 *(0 to 344.7)*	0 to 7500 *(0 to 517.1)*	0 to 10000 *(0 to 689.5)*
Accuracy	0.075% FS (typically 0.05% FS)				
Resolution	0.002% FS				
Shock and Vibration Specifications					
Vibration (random) G_{RMS}	30 G Navmat				
Shock	200 G 1 ms half sine all axis				
Frequency	0 to 2000 Hz				
Vibration Data Measurement					
Frequency	0 to 400 Hz				
G_{RMS}	0 to 30 G				

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