



Prevent Pump-Off, Stuck Tools and Expensive Fishing Operations

Maintaining safe cable tension downhole is challenging in lateral wells because surface cable tension measurements do not account for friction effects in the highly deviated sections of the well. The SMART Sens™ cable tension monitoring device is specifically designed to reduce the risk of fishing operations during pump-down in extended lateral wells.

If the cable tension is too high: pump-off can occur when the weak-point limit is exceeded.

If the cable tension is too low: the tool string may begin to stick/slip, with the erratic tool string motion increasing the risk of cable damage or pump off.

The SMART Sens™ provides a real time cable tension and compression measurement which gives the operator increased control.

Benefits:

- Minimizes fishing risk
- Compatible with commercial perforating systems
- Compact, low maintenance design
- No field calibration necessary
- Operates up to 350°F and 20k psi

Features:

- Monitors tension up to 10,000 lbf
- Measures compression up to 2,000 lbf
- Measures head voltage and temperature
- Uses standard 1-5/8" Acme Connections
- Communicates real time with the Warrior Acquisition System
- Dry Load Cell provides accurate, temperature and pressure compensated tension measurements without the need for oil compensation
- API RP-67 compliant

Measurement Specification	
Tension Range	10,000 lbf
Compression Range	2,000 lbf
Resolution	5 lbf
Sampling Rate	10 Hz

Environmental Specification	
Pressure Rating	20,000 psi
Temperature Rating	350° F
Axial Shock	2000g, 0.25ms
Max Tensile Load	100,000 lbf

Mechanical Specification	
Outside Diameter	2.75 in.
Make-up Length	2.20 ft.
Weight	33.5 lb.
Upper Connection	1-5/8 in. -6 ACME Pin
Lower Connection	1-5/8 in. -6 ACME Box

Electrical Specification	
Max Pass Through Voltage*	600 VDC
Operating Voltage*	20V to 50V
Current Draw	20 mA

*Polarity is configured to be compatible with perforating switch system used.

For more information contact your local Allied-Horizontal Wireline Services' representative or visit us online.



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