

SuperFAST Data Recorder

In an Oil and Gas industry first, the SuperFAST Data Recorder delivers advances in miniature, high shock, high speed (115,000 data points/second) data recorders. As well as sampling data at much higher speeds than the industry standard, the downhole gauge performs in high pressure and severe shock/vibrating environments, generated by explosive pressures.

Applications:

Measures Tool Movement and Acceleration/Vibration up to +50,000 G's_ which is useful in monitoring environment in which gauge is located

Used with the StimGun™ Assembly or StimTube™ tool, it can verify proper propellant burn and determine fracturing response of the formation by analysing post-job data with PulsFrac™

Multi-Speed feature allows flexibility in collecting pressure, acceleration, and vibration data at various sampling speeds and time intervals.

Recording perforating jobs

Hydraulic fracturing/stimulations

Tool movement and design

Reservoir measurements



Benefits:

Brings new features to the down-hole gauge industry with computer programming and data readout, internal micro-processor control

Automatic sensor testing and balancing

Selectable pressure, temperature and acceleration/vibration ranges (more than 130,000 combinations)

Current and internal/battery voltage readouts to verify proper gauge operation

Internal temperature and battery data

Selectable sampling rates up to 115,000 data points/second

Auto Start/Stop recording modes, up to 1,048,576 data points of memory

Uses standard, low cost AA alkaline or lithium batteries

Shock Mitigator_ isolates gauge from the tool, reducing shock and vibration that occurs when gun ignites, lengthening life of the recorder

Features:

Shock Hardened Design (+50,000 G's of acceleration/Vibration)²

VERY High Sampling Speed (up to 115,000 data points/second)

Records Pressure, Acceleration, Vibration, and Temperature

Programmable Low, Intermediate, High Speeds, and Time Intervals

Can be used as a "DROP BAR" pressure gauge

Includes a Shock Mitigator¹



SuperFAST Data Recorder

Technical Specifications:

Maximum Acceleration / Vibration	+50,000 G's of acceleration/vibration
Sampling Rate (High, Intermediate, and Slow Speeds).	115,000 data points/second, and down to one sample every 10 seconds
Data Resolution	12 bits @ 115,000 data points/sec(0.02% accuracy of full scale)
Pressure Range	30,000 psi (peak), 15,000 psi (static)
Power Requirements	6 to 12 volts, AA alkaline cells
Current Drain	500 uA sleeping / 100 mA sampling
Temperature Range	-40 °C (-40°F) to 1200°C (2192°F)
Sensor Frequency Response	0 to 10,000 Hz
Memory Capacity	1,048,576 data points
Gauge Dimensions	1 11/16" OD x 50" (22 lbs), 2" OD x 50" (36 lbs). 17-4 SS

Specifications subject to change without notice.

¹Patent Pending

²At 50,000 G's, for a duration of 1 second, a mass will accelerate from 0 to 18,000 250 km

StimTube™ Tool and StimGun™ Assembly are trademarks of Marathon Oil Company

PulsFrac™ is a trademark of John F. Schatz Research & Consulting, Inc.