



# ELECTRONIC MEMORY RECORDERS

## Sapphire Pressure Gauge

Spartek Systems specializes in providing the oil and gas industry with high quality data to monitor well performance and diagnose potential problems. Founded in 1994, Spartek Systems leads the industry in providing cost effective solutions for acquiring reliable well information.

### Product Overview

Spartek Systems once again demonstrates superior technological innovation with its latest series of Sapphire pressure recorders. Working closely with our customers, our engineering team has developed a multi-purpose gauge that significantly improves overall job performance. This new series of gauge incorporates the latest low-power three volt technology to minimize power consumption. Depending on the sampling rate, a pressure recorder could run up to one year on a single AA cell. Our engineers did not sacrifice signal resolution or sampling speed in order to reduce power consumption. The recorders utilize a proprietary parallel dual digital (PDD)

signal processing technique to maximize signal to noise and improve resolution. The software tools supporting the new Sapphire series have been enhanced to provide programming features such as pressure triggers, multi-job programming, detailed job logging, high sample rates (up to 1 sample per second), enhanced user diagnostics, and USB interface support. To learn more about these exciting new products, contact a Spartek Systems sales representative for more information.



### Primary Features

- ▶ Long battery life
- ▶ 3 V, single cell operation
- ▶ 1 sample/s sampling rate
- ▶ Pressure trigger
- ▶ Sour service operation
- ▶ Designed for USB with retrieval rates up to 50,000 samples/min
- ▶ Data separation for multiple jobs
- ▶ Advanced diagnostics
- ▶ Surface readout
- ▶ Large Memory (up to 4,000,000 samples)
- ▶ Windows 7/Vista/XP/NT/2000

### Applications

- ▶ Well Testing
- ▶ Monitor Well Performance
- ▶ Permanent Sensors (Monitoring)
- ▶ Completion Diagnostics
- ▶ Well Stimulation
- ▶ Reservoir Characterization
- ▶ Gradient Survey

## SPARTEK SYSTEMS

Providing Our Customers With "Best In Class" Technology

Email: [sales@sparteksystems.com](mailto:sales@sparteksystems.com)

<http://www.sparteksystems.com>

Specifications:

MODEL	SS2300 Series	SS2500 Series	SS2700 Series
<b>Pressure</b>			
Sensor Type	Sapphire	Sapphire	Sapphire
Range(s) (psi)	750, 1500, 3k, or 6k	10k, 15k, or 20K* * (1.0" or 1.25" O.D. only)	10k, 15k, or 20k* * (1.0" or 1.25" O.D. only)
Accuracy <sup>1,2</sup>	0.3 psi or 0.024% Full-Scale	0.3 psi or 0.024% Full-Scale	0.3 psi or 0.024% Full-Scale
Resolution	0.0003% Full-Scale	0.0003% Full-Scale	0.0003% Full-Scale
Drift	< 0.024% Full-Scale / year	< 0.024% Full-Scale / year	< 0.024% Full-Scale / year
<b>Temperature<sup>3</sup></b>	135°C 275°F	150°C 302°F	170°C 338°F
<b>Power Requirements</b>			
Voltage (min)	3 V	3 V	3 V
Current (Sleep)	0.10 mA	0.10 mA	0.20 mA
Current (Sample)	4.50 mA	4.50 mA	4.80 mA
<b>Data Acquisition</b>			
Channels	Pressure Temperature Time	Pressure Temperature Time	Pressure Temperature Time
Fastest sample rate	1 sec/sample	1 sec/sample	1 sec/sample
Memory Capacity	1,000,000 samples	1,000,000 samples	2,000,000 samples
Option(s)	4,000,000 samples	4,000,000 samples	
Pressure Trigger	Yes	Yes	Yes
<b>Housing</b>			
Material	17-4 PH	17-4 PH	17-4 PH
Options	Inconel 718-NACE	Inconel 718-NACE	Inconel 718-NACE
Diameter	(0.75", 1.00", or 1.25")	(0.75", 1.00", or 1.25")	(0.75", 1.00", or 1.25")
Length	(Varies with configuration) Contact your Spartek Representative with your requirements.	(Varies with configuration) Contact your Spartek Representative with your requirements	(Varies with configuration) Contact your Spartek Representative with your requirements.
<b>Communications</b>	RS232 / USB	RS232 / USB	RS232 / USB
<b>Software OS</b>	Windows 7/Vista/XP/NT/2000	Windows 7/Vista/XP/NT/2000	Windows 7/Vista/XP/NT/2000
<b>Surface Readout</b>	Yes	Yes	Yes

Notes:

1. Accuracy is larger of the two stated values. This includes the combined effects of hysteresis, repeatability, and the corrected linearity over the calibrated temperature range.
2. Pressure accuracy for the lower pressure transducers are based on the following calibrated temperature ranges: 750 psi (0 to 80°C), 1500 psi (0 to 100°C), and 3000 psi (0 to 120°C). All other transducers are based on maximum operating temperature specified. Consult your Spartek representative for specifications at other calibrated temperature ranges.
3. Operating Temperature Range for the equipment is stated from 0°C to max temperature. Actual calibrated temperature range can vary based on customer requirements

Specifications subject to change without notice

For More Information, Pricing, and Technical Support Contact:



#1 Thevenaz Industrial Trail  
Sylvan Lake, Alberta  
Canada, T4S 2J6

Tel: (403) 887-2443  
Fax: (403) 887-4050

Providing Our Customers With "Best In Class" Technology