

Rapidlogger™

Oilfield Job Monitoring System from Rapidlogger Systems



Rapidlogger Systems is a provider of efficient monitoring hardware and software systems for oilfield applications.

At Rapidlogger Systems we have designed and developed a range of products for use in the oilfield. Our products are extremely rugged and designed for the harsh oilfield and petrochemical environments. The Rapidlogger system enhances operational safety and improves operations through its efficiency and ease of use.

Applications

Rapidlogger is a self contained, state-of-the-art system for job monitoring and recording on wellheads, wireline, slickline, coiled tubing and (cementing, fracturing, and Nitrogen) pumping units. The Rapidlogger can record, monitor, display and report depth, speed, weight, wellhead pressure, pump-rate, pump-volumes and other rig parameters.

Highlights

The Rapidlogger is oilfield rugged, compact, and cost-effective. It is the most efficient system available in the market today. The system is simple to use and an equipment operator can use the system without any training. Job data can be recorded on removable and upgradeable MMC/SD flash memory cards.

The standard system has four analog data channels, 2 frequency channels, two encoder channel (for depth measurement).

The system is expandable and more data acquisition channels can be added as required. The system runs on 12 to 24 Volts DC power (which is available on most oilfield units). In the basic configuration the system can record more than 200 hours of job data. This job memory can easily be increased with a higher capacity flash card.

The Rapidlogger is a stand-alone unit that does not require a PC for operation, display or recording of data. However it can transmit its data to a PC if needed both in real-time and after the job to transfer data etc.

Features

The package is very compact and suitable for panel mounting in the control cab of oilfield trucks. Rapidlogger has been specifically designed from the ground up for use in harsh and hazardous environment. The maintenance free NEMA 4 enclosure houses the embedded computer, acquisition hardware, display, keypad and the flash memory.

A powerful PC application that runs on any Windows based PC can be used to download the data in realtime or after the job to prepare a job report for the customer.

Production Monitoring Mode:

When used in the production monitoring mode the system measures, displays and records: wellhead pressure, production flowrate, pumpjack speed, storage tank level and temperature. If needed it can also control the pump jack motor speed. Additional parameters can be selected, monitored and recorded. The unit can be networked on an Ethernet network for centralized monitoring and control.

Coiled Tubing Mode:

When used in the coiled tubing mode, the system measures, displays and records:

Rapidlogger™

depth, speed, weight, wellhead pressure, circulating pressure, pump rate and other parameters that the operator may choose. It can also trigger a solenoid valve to stop the unit if hanging weight or depth limits are exceeded.

Slickline Mode:

When used in the slickline mode, the system measures, displays and records: depth, line tension, wellhead pressure, and other parameters that the operator may choose. The system can also correct the depth for line stretch and thermal expansion. It can also shutdown the slickline winch with a solenoid valve based on a line over-pull condition.

Pump truck Mode:

When used in the pump truck mode, on a cementing, fracturing, Nitrogen or acid pump, the system measures, displays and records: pump pressure, pump rate, pump volume, inlet pressure and other parameters that the operator may choose. It can also trip the pump if the pressure exceeds a high limit preset by the operator.

Hardware

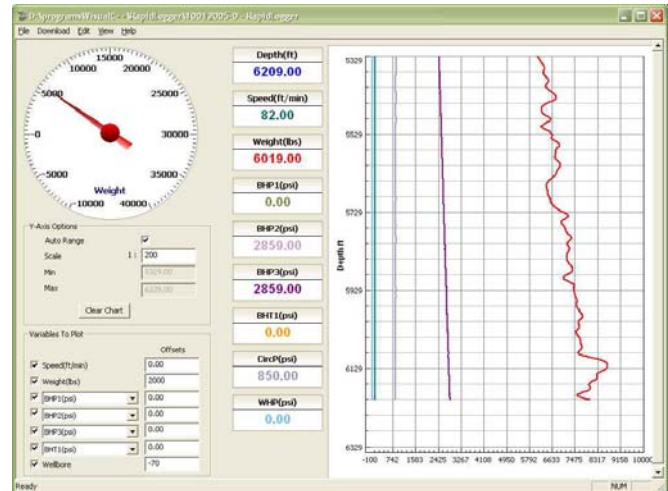
The basic Rapidlogger system is capable of acquiring four analog, two depth and two frequency channels. It can also control up to 3 PWM high current digital outputs. Additional channel inputs can be added to the base system as options. The system operates from 12-24VDC or 110-240VAC. The system can be retrofitted in existing units or incorporated into new service units. The system has been designed for continuous operation in harsh environments. Contact us with your specific requirements.

Software

The Rapidlogger software panel runs a real-time embedded operating system on its rugged high-speed microprocessor. The real-time operating system allows the system to turn on instantly and be crash proof.

The Rapidlogger-PC is the optional laptop software for generating job reports and downloading data to the PC runs under Windows (95/98/NT/2000). The

laptop and the PC software is not needed for operation or job recording. It is only required for generating job reports or setting up enhanced data displays from the Rapidlogger system.



Rapidlogger is also available for Windows CE based pocket PCs. This version can communicate with the Rapidlogger hardware over an optional WiFi interface and provide data anywhere on the wellsite within WiFi range.

Specifications

Operating Temperature	-40°C to 70°C
Operating Environment	NEMA 4X
Analog Inputs	4/24 max, 16bit
Frequency/Depth Inputs	4/8 max
Display	LCD w/ Backlight
Computer Interface	Serial, Ethernet
Power	12/24DC, 110/240AC
Program Memory	2MB Flash
Job Memory	256MB/1GB SD card

Available Options

- Sensors for E-Line and Wireline
 - Tension cell, depth sensor
- Sensors for Coil
 - Tubing weight, wellhead & circulating pressure & depth sensor
- Intrinsic Safety Barriers
 - For use in offshore operations in hazardous areas
- Overpull/Overpressure control
 - Stop the winch or coil to prevent parting
- Laptop PC Cable
 - Connects with a laptop to generate job reports
- Software interface capability for
 - OPC, ASCII
- Rapidlogger-PC Job reporting software
 - To generate job reports and to replay recorded jobs