Sigra V10 Logger

Voltage

Frequency

Resistance

Vibrating Wire

Counter

Milli-Hertz Frequency Resolution

Mesh Networking

Mini-USB Connectivity

Radio Communication

Centralized Control by RS485/Radio

Cellular & Satellite Network Connection

Large Data Storage

Data Acquisition & Processing Service

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Sigra field loggers may be used to collect and or transmit data.

The loggers will directly read many kinds of transducer including those with voltage and frequency outputs, vibrating wire transducers or resistance devices. Digital transducers supporting Modbus can also be monitored.

Loggers can communicate via radio. Radio communication is supported via plug modules. The country of operation and or range required dictate which modules are employed. Options are available from 920 MHz or 2.4 GHz ISM bands. Both options offer a self-healing mesh network with reliable inter-logger ranges of 0.6 km (at 2.4 GHz) to 2.5 km (at 920 MHz) using an omnidirectional antenna.

Loggers can also be grouped together by RS485 or radio communication with one of the loggers acting as the master. This centralized control enables users to remotely talk to a group of loggers without establishing multiple serial connections.

The Logger software is used to push settings to the Logger and download data from it. Users can communicate with the Logger locally by mini-USB wire, or remotely by cellular and satellite modem.

The data transmitted may be acquired by the client's own data acquisition system, or generally and more conveniently, via Sigra who will collect and place it on the web for secure access by the client.
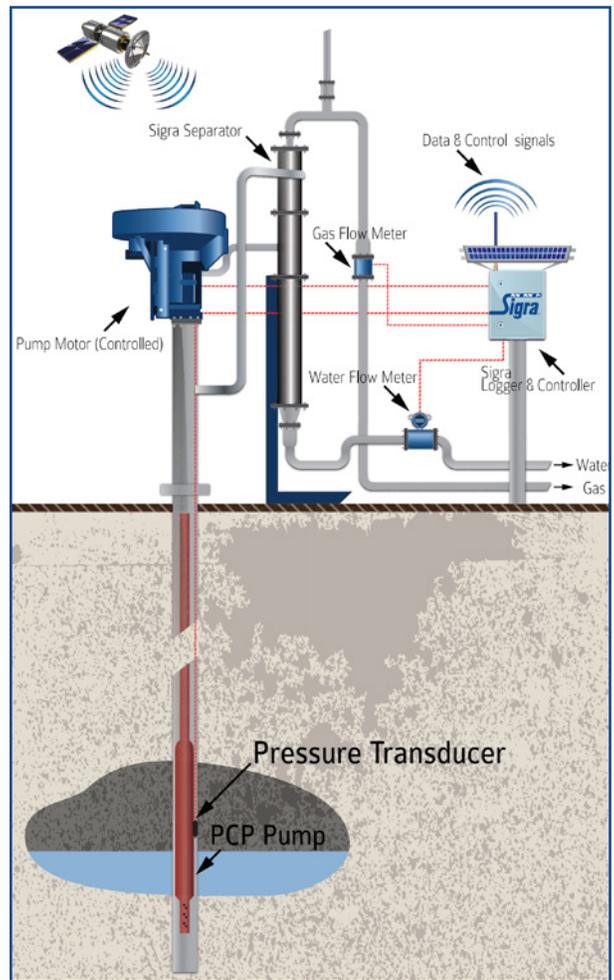
The applications for Sigra's V10 Logger are vast. Field applications may include:

Groundwater monitoring
- Piezometers
- Pump flow
- Pump control option

Landslide or excavation monitoring
- Piezometers
- Tiltmeters
- Extensometers
- Ground anchor monitoring
- Surface water monitoring
- Reservoir levels
- River or creek levels
- Rainfall monitoring

Wellbore monitoring and control

Landslide monitoring and warning system

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Specifications: V10 Logger

Communication with the Logger by:
- PC: Mini-USB, RS232, Radio
- Data Modem: Cellular Modem, Satellite Modem
- Between Loggers: RS485, Radio

Sensors
- Vibrating Wire
  » Range: 0.5 ~ 5 kHz
  » Resolution: 0.01 Hz
- Resistance
  » Range: 0.5 ~ 5 kHz
  » Range: 0 ~ 330 kΩ
  » Resolution: 1 Ω
- Voltage
  » Range: 0 ~ +5V DC
  » Resolution: 77 µV
- Frequency
  » Range: 0.5 ~ 5 kHz
  » Resolution: 0.01 Hz
- Counter
  » Cumulative counts or reset on read
  » Rate: 0-100 Hz

Channels
- Vibrating Wire: Only on Channel 1, 3, 5, 7
- Counter: Only on Channel 2, 3, 6, 8
- Voltage, Frequency, Resistance: All channels

Max Data Rate
- 4 Seconds
- Fast Read Mode

Process Control
- A 5V output port only activates during each measurement

Radio
- Frequency: 2.4 GHz ISM Band or 920 MHz
- Transmit Power: 63 mW and 250 mW respectively
- Reliable range: 0.6 km and 2.5 km respectively dependent on local conditions and topography

Power
- 8 ~ 16 V(DC)
- Rechargeable Battery with built in Low Voltage Disconnect (LVD) and solar panel for weather enclosure

Environmental Rating
- DIN Mounting: IP20
- Weatherproof Enclosure: IP65

Memory
- 32GB, Maximum 18250 days record (50 years)

Software
- Compatible with Windows XP, Vista, 7, 8, 10