Micro-1000 Datalogger

Applications

The Micro-1000 is ideally suited for remote, unattended monitoring of a variety of sensors in geotechnical, hydrologic, meteorologic and oceanographic fields. Applications include…
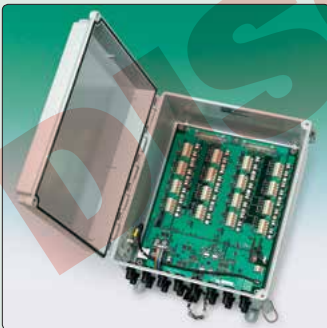
- **Dam monitoring**

- **Tunnel and underground excavation monitoring**

- **Structural monitoring**

- **Water and stream levels**

- **Pump tests**

- **In-Place Inclinometer readout**

- **Alarm actuation**

● *Model 8021 Micro-1000 Datalogger (right) and the Model 8032 16 Channel Multiplexer (left).*

● *Model 8021 Micro-1000 Datalogger.*

● *Model 8032 Multiplexer (MUX).*

Compatibility

The Micro-1000 is a complete datalogger, designed around the Campbell Scientific, Inc. (CSI) Model CR1000 Measurement and Control System and the AVW200 Vibrating Wire Spectrum Analyzer, an interface designed to eliminate the effects of electrical noise and interference on vibrating wire sensor signals.

Reliability

The Micro-1000 is housed in a NEMA 4X fiberglass reinforced polyester enclosure, which is designed for use in harsh environments with wide temperature tolerance, resistance to moisture and humidity and protection against lightning damage.

Versatility

Virtually any type of sensor can be read by the Micro-1000 datalogger. Although primarily manufactured for use with vibrating wire sensors and thermistors, the Micro-1000 can be configured to read Carlson type sensors, voltage type sensors, 4-20 ma sensors, and numerous other specialty sensor types.

Capacity

When used with the Model 8032 Multiplexer, the standard Micro-1000 datalogger can read up to 96 vibrating wire sensors and 96 thermistors. Optionally the system can read up to 256 two-wire sensors.

Memory

Standard memory storage capacity for the Model CR1000 Measurement and Control System is 4 MB of battery-backed SRAM.
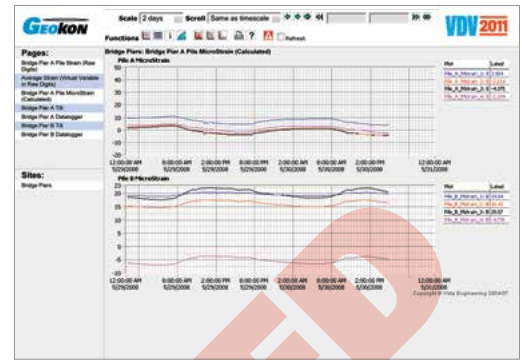
Control

The Model CR1000 Measurement and Control System has 8 digital I/O ports that can be used for enabling and clocking multiplexers, starting pumps and machinery, or for activation of alarm systems when pre-programmed sensor output limits are exceeded.
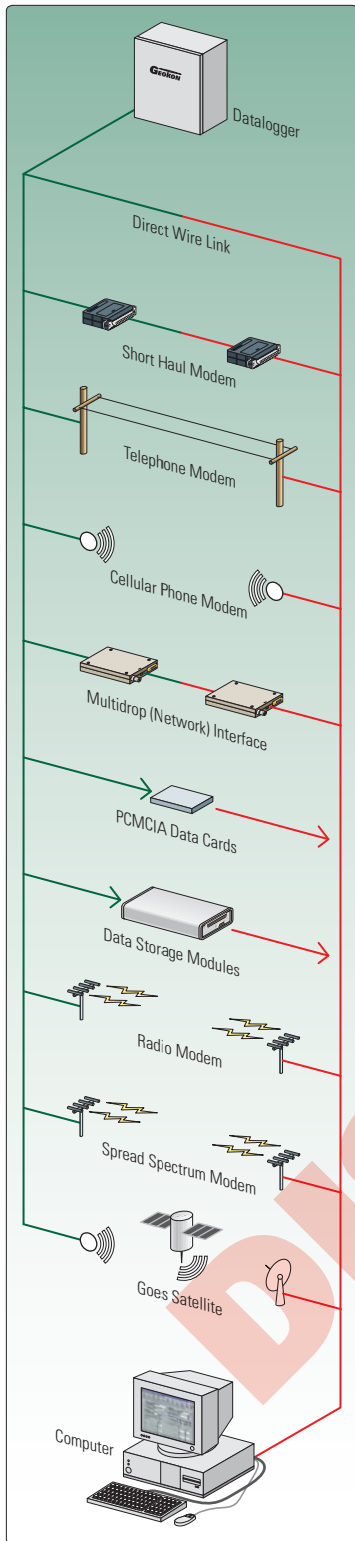
● *Data retrieval options.*
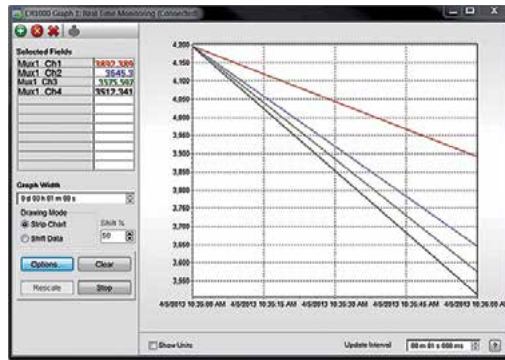
● *Sample LoggerNet® screen shot.*

● *Vista Data Vision db.data.browser screen.*

Communications

The Micro-1000 Datalogger is designed for use with Windows® based computers containing a serial port or USB port. Communication is accomplished by a direct connection with the datalogger.

Additional communication methods are available, such as: Short Haul Modems, Multidrop Interfaces, Landline Telephone Modems, Cellular Modems, Radio Modems, and Ethernet Interfaces.

Software

Windows® based LoggerNet® software provides the user with complete control over the datalogger, by allowing the user to create the program which is executed by the datalogger.

Windows® based MultiLogger software allows for an efficient means of deploying the datalogger by providing easy to use menus and selections to build the datalogger program, monitoring the current activity, and collecting the data.

Vista Data Vision (VDV) software provides a complete data management package for the previously collected data. VDV also provides the means for browsing, reporting and publishing data to the Internet.

Power

The Micro-1000 is powered by an internal 12 V, 7.0 Ah Gel Cell that is maintained by an external AC powered charger (supplied). Alternatively, a larger external battery, or a solar panel, can be connected to provide power to the system (please contact Geokon for details).

Technical Specifications

Range	(analog) ±2.5 millivolts to ±5 volts
	(frequency) DC to 200 kHz
Resolution	(analog) 0.33 microvolts to 1333 microvolts
	(frequency) ±192 nS/no. cycles measured
Accuracy	(analog) ±0.12% of reading, plus offset
	(vibrating wire) ±0.013% of reading
Excitation Output	±2500 mV
Battery	12 V, 7 Ah Gel Cell
Temperature Range	−25°C to +50°C
L × W × H[1]	447 × 405 × 212 mm

[1]Does not include mounting feet.

The World Leader in Vibrating Wire Technology™