



## Field Datalogger Model 6210-GS-FDLM10

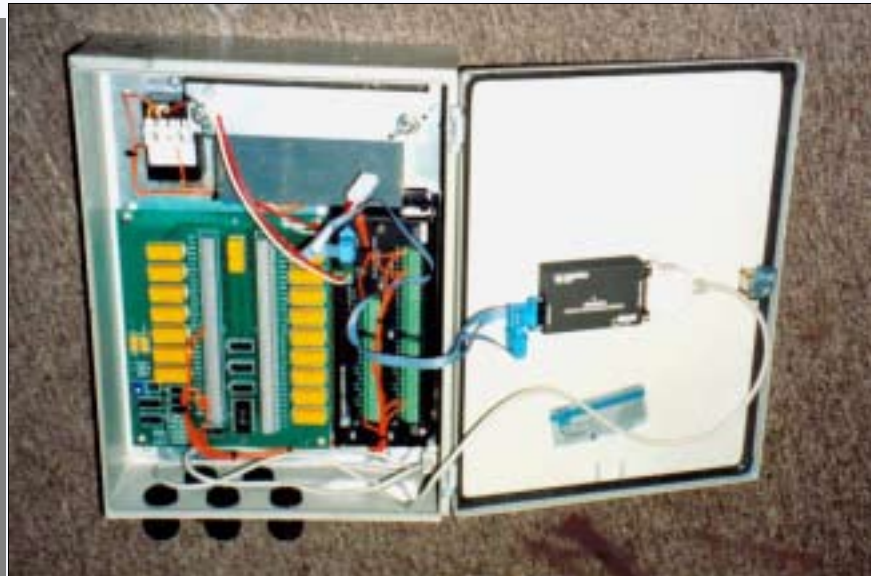
### FEATURES

- High accuracy
- Rugged construction
- 64K memory, expandable
- Battery operated, low power consumption
- Reads all types of sensors
- Expandable to 4096 channels
- Fully programmable with control capabilities
- Multiple data retrieval options

### APPLICATIONS

The Field Dataloggers are ideally suited for remote, unattended monitoring of instrumentation for the following projects or studies:

- Geotechnical
- Structural
- Environmental
- Hydrological
- Meteorological
- Hydrogeological
- Oceanographical



### General

Geosystems Field Dataloggers Model 6210-FDLM10 are based on the well-proven Campbell Scientific CR 10 logger module and other components.

The datalogger is packaged inside a weatherproof enclosure suitable for field operation in extreme conditions. Rechargeable batteries power the dataloggers with the capacity to operate for several months (depending on the number of instruments and reading intervals).

### Description

The datalogger module is a microcomputer, clock multimeter, calibrator, scanner, frequency counter and controller. It has the capacity to drive multiplexers, count pulse inputs and transmit three independent excitations.

Geosystems dataloggers can be configured in different ways, making it versatile for a variety

of applications. The basic unit can monitor up to 12 channels of single ended sensors (or six differentials). The number of channels can be expanded in increments of 64 single ended (32 differential or vibrating wire) up to a maximum of 4096 (2048). The scan intervals are programmable.

The datalogger is protected against transient and EMI surges with spark gaps and/or tranzorbs. The rechargeable battery (12 volts 6.5 Ahr gel-cell) is supplied with a mains power charger unit, and/or solar panels. The weatherproof steel enclosure is lockable and is supplied with individual glands for all cable entries. Stainless steel, watertight and other types of enclosures are available on request.

Field Datalogger Model 6210-GS-FDLM10

## Input Capability

The Geosystems Datalogger can monitor a wide range of instruments including those listed below. Where necessary, appropriate interface components will be incorporated in the module.

**Vibrating Wire Sensors:** piezometers, strain gauges, settlement systems, load cells, extensometers, stressmeters, earth pressure cells, jointmeters etc.

**Linear Potentiometers, LVDTs and DCDTs:** transducers commonly used for displacement measurement in extensometers, crackmeters etc.

**Resistance and Semiconductor Sensors:** (bonded strain gauges): load cells, earth pressure cells, structural monitoring etc.

**Servo-Accelerometers:** inclinometers, tiltmeters, in-place inclinometers etc.

**Thermistors & thermocouples:** temperature monitoring of concrete, steel and other transducers.

**Other Instruments:** sensors with 4-20 mA output, pH/conductivity probes, temperature and relative humidity sensors, rain gauges, RTDs, gypsum soil moisture blocks, capacitance transducers, flow meters, pyrometers, anemometers, gas sensors etc.

## Datalogger Applications

Geosystems dataloggers are ideally suited for remote, unattended monitoring in a wide range of applications, such as geotechnical, structural, environmental, hydrological meteorological and oceanographical projects.

The following are some projects where dataloggers are commonly used.

- **Dam Monitoring:** The datalogger can be used in conjunction with various vibrating wire or other electric instruments to remotely monitor pore pressure, displacement, tilt, seepage, water level etc.
- **Pump Testing:** The datalogger can be used in conjunction with various vibrating wire piezometers to monitor draw-down of the groundwater table at various observation wells around the main pumping well.
- **Inclinometers:** The datalogger can be configured to monitor readings from inclinometer systems (either portable biaxial/uniaxial probes or in-place inclinometer system).

- **Tunnel and Underground Excavation Monitoring:** The datalogger can be used in conjunction with various vibrating wire or other electric instruments to monitor convergences, loads on rock anchors or struts, pore pressures, tilts, earth pressures, shotcrete, wall stresses, displacements.

- **Stream Levels and Water Quality Monitoring:** The datalogger can be used to remotely monitor river water levels and other water quality parameters (such as conductivity, temperature, dissolved oxygen, pH, etc) -using appropriate instruments and interface components.

- **Alarm activation:** The datalogger is ideally suited to activate alarms whilst monitoring various parameters such as displacements, pressures, loads etc. By programming the datalogger to compare current readings in real time to threshold values, it can activate alarms when these values are exceeded.



## Specifications

|                              |  |
|------------------------------|--|
| <b>Enclosure</b>             | Epoxy coated steel, weatherproof, lockable with individual cable glands (stainless steel, watertight or other types available on request)                  |
| <b>Size</b>                  | 380 x 380 x 210 mm standard (other sizes available on request)   |
| <b>Weight</b>                | 15 kg  |
| <b>Battery</b>               | 12 Volts Gel-cell 6.5 Amp-hour   |
| <b>Operating Temperature</b> | -25° to 50°C (-55° to 80°C available)  |
| <b>Charger</b>               | 240 VAC 50Hz 12V DC<br>(Solar Panel optional on request)   |
| <b>Surge Protection</b>      | CR10 Datalogger has in-built tranzorbs and spark gaps for surge protection. (Additional surge protection modules on instrument lines available on request) |

Due to on-going design improvements and reviews, we reserve the right to amend product and specifications without prior notice



FOR FURTHER INFORMATION

environmental systems & services | 8 River Street, Richmond VIC 3121 Australia  
T + 61 3 8420 8999 | F + 61 3 8420 8900 | geotechnical@esands.com | [www.geosystems.com.au](http://www.geosystems.com.au)