DATASHEET

GeoLogger CR Series

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GEOSENSE

GeoLogger CR Series

Overview

The Geosense® Geologger CR Series is built around the Campbell Scientific CR300, CR6, and CR1000X control modules and offers reliable remote monitoring under demanding geotechnical conditions.

Functions include sensor measurement, timekeeping, data reduction, data storage, control and alarm notification.

The CR series of data loggers are capable of monitoring all types of sensors including vibrating wire, strain gauge, MEMS (analogue & digital), thermistor, linear potentiometer etc.

The three main models are the CR300, CR6 and CR1000X although other options are available on request.

The requirement for monitoring varies widely depending on the project and the final configuration will depend on the type, number, precision and speed of measurements required. Each Geosense CR Series data logger is pre-assembled, pre-wired, pre-tested and pre-programmed prior to delivery meaning quick and easy set up on site.

Designed to be mounted in the field, the CR series is mounted in robust water resistant IP66 enclosures to provide maximum protection under the harshest environments.

APPLICATIONS

Remote data logging of geotechnical & structural instrumentation in:

- Dams
- Tunnels
- Deep excavations
- Buildings
- Bridges

FEATURES

- Tailored to your individual requirements
- Precision measurement capability
- Rugged construction
- Wide operating temperature range
- Dynamic vibrating wire option available
- Low power consumption

GeoLogger CR Series

Specifications

Listed are the main components of a CR Series data logging system. The choice of components will depend on the individual project. Please contact Geosense for product selection.

CENTRAL PROCESSING UNIT (CPU)

All the components are linked to the CPU. The CR300, CR6 or CR1000X have a fully programmable controller with non-volatile memory and battery backed clock.

INTERFACES

Vibrating wire sensors require an additional interface (AVW200) and digital RS-485 to RS-232 which is connected between the CPU and the instrument.

MULTIPLEXERS

A relay mechanism controlled by the CPU to switch between multiple sensors so they can be monitored by a single CPU. Allows multi sensors to be fed into the measurement & control module. Static and dynamic versions are available for vibrating wire.

POWER SUPPLY

A power supply provides regulated power to the logger and sensors. 12 volt DC fed either by 220 volt mains adaptor and charger with 12 Volt DC battery backup or a 12 Volt DC battery with solar panel.

COMMUNICATION

Remote or local connection to the CPU to program or download data including GPRS, radio and cable.

DYNAMIC MONITORING

Eight-channel interface allows dynamic measurement of vibrating wire with rates from 20 to 333Hz.

BAROMETER

For compensation due to changes in barometric pressure for sensors used for pressure monitoring.

ENCLOSURE

Houses all the above components mounted, prewired and pre-programed in a robust IP66 enclosure for mounting on a suitable location such as a wall pole or support frame.

SUPPORT BRACKET

Special support bracket for the data logger box and/ or solar panel

SOFTWARE

To allow the monitoring interval of the sensors to be set at defined times. (Loaded onto CPU).

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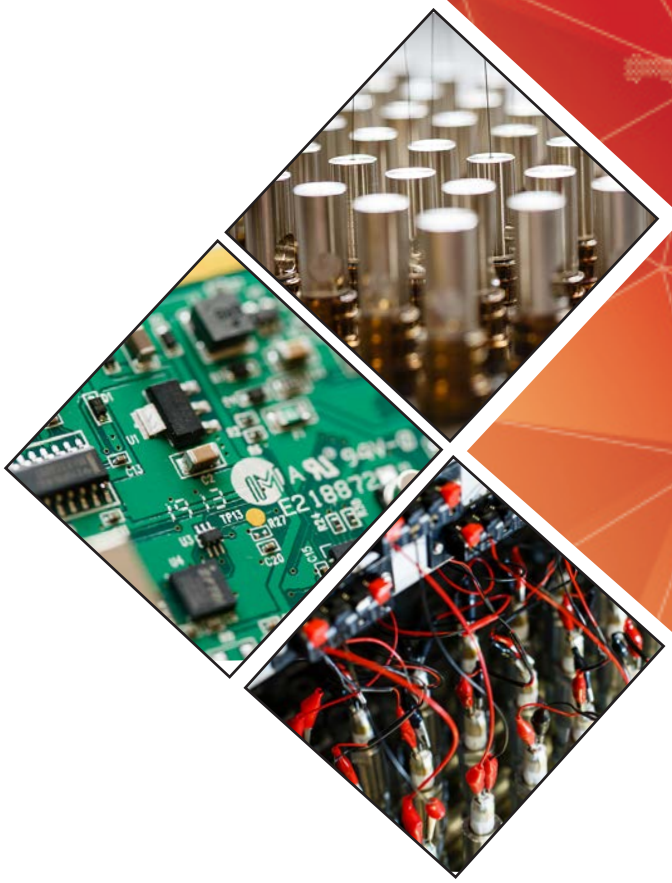
Specifications

MODEL	GL-CR300	GL-CR6	GL-1000
Central processing unit	CR300	CR6	CR1000X
Sensor inputs	VW, V, mV/V, 4-20mA, Pt100, NTC, RS-485	VW, V, mV/V, 4-20mA, Pt100, NTC, RS-486	VW, V, mV/V, 4-20mA, Pt100, NTC, RS-487
Data Storage	30 MB	72 MB	72 MB
Power supply	Mains or solar	Mains or solar	Mains or solar
Power backup	12V battery	12V battery	12V battery
Voltage	16 to 32 VDC	16 to 32 VDC	10 to 18 VDC
Standby current	1.5mA	<1mA	<1mA
VW interface	AVW200	Integral	AVW200
Pulse counter inputs	8	16	10
Local digital ports	RS-232, RS-485	RS-232, RS-485, CPI	RS-232, RS-485
Local analogue inputs	6 single-ended or 3 differential	12 single-ended or 6 differential	16 single-ended or 8 differential
Maximum scan rate	10 Hz	1000 Hz	1000 Hz
Sensor expansion	Multiplexer (Static)	Multiplexer (Static & dynamic)	Multiplexer (Static & dynamic)
Digital interface	RS-485 to RS-232	Integral	Integral
Communication	GPRS 3/4G modem	GPRS 3/4G modem	GPRS 3/4G modem
ADC	24-bit	24-bit	24-bit
Clock Accuracy	±3 min. per year	±3 min. per year	±3 min. per year
Temperature Range	-40° to +70°C	-40° to+70°C	-40° to +70°C
Control software	LoggerNet	LoggerNet	LoggerNet
Cabinet dimensions*	400 x 400 x 180mm	500 x 400 x 200mm (16 channel)	500 x 400 x 200mm (16 channel)
Enclosure rating	IP66	IP66	IP66

* Dimensions will vary according to number and type of multiplexers



GEOSENSE

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