



INSTRUMENTS

GEO VW Datalogger

4-Channel Vibrating Wire Datalogger

Applications

The GEO Vibrating Wire Datalogger is used to read all of Geo-Instruments vibrating wire instruments, including:

- Crackmeters
- Piezometers
- Settlement systems
- Precision water level sensors
- Temperature Sensors

Overview of Operation

The GEO VW datalogger is designed to be standalone, single-channel datalogger, which make them useful on small projects where only a few sensors are installed. The GEO VW datalogger is a self-contained, 4 channel version datalogger.

It is housed inside a Fiberglass NEMA 4X enclosures, which makes them very robust, weather-proof and particularly well-suited to operation in harsh environments. Low power consumption provides long battery life. The condition of the main batteries is reported as an element in the data array.

Data memory consists of a 320K bytes of EEPROM. This translates into a memory storage ca-



Geo-Instruments 4-Channel Vibrating Wire Datalogger

capacity of 16,000 arrays for the GEO-2, 10,666 arrays for the GEO-2A, and 3,555 arrays for the GEO-2x16. Each array consists of the datalogger ID, day (Julian or month/day format), time, seconds, main battery voltage, datalogger temperature, vibrating wire sensor reading (in engineering units), the sensor temperature and array number. The array transmission is in comma delineated ASCII text, for easy importation into popular spreadsheet programs.

Power

The GEO VW Datalogger is powered by easily accessible, alkaline D cells, or by an external 12V source. For extended battery life, a solar panel and rechargeable batteries can be used.

Communications

The GEO VW Datalogger is available with a RS-232 Serial Interface or with a direct USB 2.0 connection; patch cords are supplied for this purpose.

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We make it easy to
get the data you need.

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Specifications

	Single-Channel	4-Channel
Measurement Accuracy	+/- 0.05 % F.S. (450 –4000 Hz)	+/- 0.05 % F.S. (450 –4000 Hz)
Measurement Resolution	1 part in 20,000	1 part in 20,000
Program Memory	24K FLASH	24K FLASH
Data Memory	320K EEPROM	320K EEPROM
Data Collection	RS-232, USB, or RS-485	RS-232, USB, or RS-485
Storage Capacity (Arrays)	16,000	10,666
Temperature Range	-30°C to +50°C	-30°C to +50°C
Temperature Measurement	(accuracy) 2.0% F.S./ (resolution) 0.1° C	(accuracy) 2.0% F.S./ (resolution) 0.1° C
Communication Speed	9600 bps	9600 bps
Communication Parameters	8 data bits, no parity, 1 stop bit	8 data bits, no parity, 1 stop bit
Power Supply	3 VDC (2 Alkaline 'D' cells)	3 VDC (2 Alkaline 'D' cells)
Communication Current	<100 mA	<100 mA
Measurement Current	<200 mA	<200 mA
Quiescent Current	<500 µA	<500 µA
Scan Interval	3 - 86,400 seconds (24 hours)	3 - 86,400 seconds (24 hours)
Operating Time (20°C)	3 days-3 years, depending on scan interval	8 days-2 years, depending on scan interval
Sensor Connection	(GEO-2) Hard Wired / (GEO-2A) 10 pin connector	Hard wired
L x W x H	260 x 160 x 91 mm	122 x 120 x 91mm

