

Advanced design and technology plus years of geotechnical expertise have produced the GMS Geotechnical Monitoring System - a versatile, powerful – yet low power & cost effective system.



The GMS is an industrial-grade, vibrating wire strain gauge and temperature monitoring system suitable for the harshest of environmental conditions.

This versatile, powerful – yet low power, & cost effective system will ensure longevity for field monitoring of critical infrastructure such as dam, construction and other monitoring applications.

- » **Vibrating Wire Strain Gauge System**
- » **Low Cost Per Channel**
- » **Expandable to 320 analog inputs**
- » **Strain Gauge Support**
- » **Web & FTP client / server**
- » **3 Year Warranty**

- A cost effective system capable of measuring 24 vibrating wire strain gauges with thermistors - expandable up to 320
- Standalone or part of a network with powerful inbuilt communication options, allows access to data how or where you want
- Capable of testing the integrity of vibrating wire sensors
- Includes USB memory stick support
- Rugged design and construction provides reliable operation in the extremes of the geotechnical environment and applications
- Designed and manufactured in Australia to the highest quality standards.

Getting the Data

View the data in real time or store up to 10 million data points. Data storage and retrieval can be achieved via USB memory stick, FTP, Modbus for SCADA, Ethernet or Web. The web server allows browser access to data and files, FTP provides data to your office without the need for polling or specific host software.



Measure up to 24 inputs - Expandable to 320



GMS Specifications

Sampling

Integrates over 50/60Hz line period for accuracy and noise rejection

Maximum sample speed: 25Hz

Effective resolution: 18 bits

Linearity: 0.01%

Common mode rejection: >90dB

Line series mode rejection: >35dB

Alarms

Condition: high, low, within range and outside range

Delay: optional time period for alarm response

Actions: set digital outputs, transmit message, execute any GMS commands.

Data Storage

Internal Store

Capacity: 128MB = approx 10,000,000 data points

Removable USB device (optional accessory)

Types: compatible with USB 1.1 or USB 2.0 drives, e.g. Flash drive.

Capacity: approx. 90,000 data points per MB.

Communication Interfaces

Ethernet Port

Interface: 10BaseT (10Mbps)

Protocol: TCP/IP, Modbus (Master/Slave)

USB Port

Interface: USB 1.1 (virtual COM port)

Protocol: ASCII command

Network (TCP/IP) Services

Uses Ethernet and/or Host RS232 (PPP) ports

Command Interface

Access the ASCII command interface of the GMS via TCP/IP

Web Server

Access current data and status from any web browser.

Download data in CSV format.

Command interface window. Define mimic displays.

FTP Server

Access logged data from any FTP client or web browser

FTP Client

Automatically upload logged data direct to an FTP server

System

Display and Keypad

Type: LCD, 2 line by 16 characters, backlight.

Display Functions: channel data, alarms, system status.

Keypad: 6 keys for scrolling and function execution.

Status LEDs: 4 (sample, disk, attn, pwr)

Real Time Clock

Normal resolution: 200µs

Accuracy: ±1 min/year (0°C to 40°C), ±4 min/year (-40°C to 70°C)

Power Supply

External voltage range: 10 to 30Vdc

Internal battery: 6Vdc 4Ahr lead acid

Peak Power: 12W (12Vdc 1A)

Optional Telemetry

Radio Comms

LinkVUE RF Comms

900Mhz RF radio. Range up to 3km (mesh) and 14km (point-to-point)

MODBUS RS232 / RS485 comms interface

VW Sensor Specifications

Pressure Range (kPa)

345, 518, 690, 1034, 2068, 3447, 5171, 6895

Over Range

2 x rated pressure

Resolution

0.025% FS

Accuracy

± 0.1% FS

Non-linearity

<0.5% FS

Temp Range

-20° to +80°C

Thermal Effect

<0.05% FS/°C

Diameter x Length

20 x 140mm

Weight

210g

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