

Gateway + Vibrating Wire Datalogger (GVWD)



Your data, when and where you want it...

GSS's GVWD is an integrated gateway and vibrating wire datalogger. GVWD wirelessly enables cabled vibrating wire sensors to take readings and schedule uploads of raw data and temperature at user-defined intervals. The GVWD is a fit-for-purpose device that gives you the flexibility to install the number of channels required for the job. It can be fitted with as few as 1 channel and upgraded later with additional pluggable modules for up to 16 channels.

Features

- Supports from 1 to 12 Vibrating Wire Devices as Standard; custom version supports up to 16
- 3G/4G Communication Module
- Replaceable Communication Module – Future Options include 5G, IoT, LoRa, WiFi and UHF
- Optional Bluetooth and Mobile Application for Onsite Configuration
- Remotely Manageable and Configurable via SMS and Configuration File Downloads
- Auto Scan and Configure Feature
- Easy Installation and Removal
- 6 LEDs for Visual Operation
- IP65 Rated Case
- Spring Loaded Screw Terminals
- Integrated Temperature and Barometer
- CSV Data Output for easy GIS Integration
- Data Uploads over FTP/FTPS and HTTP/HTTPS
- Industrial 512MB MicroSD Card
- Years of Battery Life under normal operations conditions
- Powered via:
 - 4 Replaceable D Cell Lithium Primary Batteries
 - USB Connector
 - Solar Power Connector
- Integrated Battery Fuel Gauge



Applications

- Construction Sites
- Structural Health Monitoring
 - Buildings
 - Bridges
 - Tunnels
 - Airports
 - Railways
 - Pipelines
- Foundation Monitoring

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| General Specifications | |
|--------------------------------|---|
| Part Number | GVWD – 12 channels maximum GVWD16 – 16 channels maximum (custom order) |
| Vibrating Wire Devices | From 1 to 12 (Standard) 1 to 16 (Custom) |
| Compatibility | Measures single-coil vibrating wire instruments from most manufacturers (e.g. piezometers, load cells, strain gauges, crack meters, extensometers) |
| Auto Detection & Configuration | <ul style="list-style-type: none"> Automatically detects & configures sensors - can identify coils from 50 Ω to 10 k Ω Ability to manually override auto-detection configuration settings |
| Frequency Range | 30 to 6,000Hz |
| Measurement Rate | ~ 2Hz per channel |
| Analog Output | Frequency value to current and voltage output, resolution up to 1/8000 |
| Precision | 0.05Hz ~ 0.25Hz |
| Measurement Modes | Scheduled measurement |
| Reading Frequency | From every 1 minute to 1 reading per day |
| Upload Frequency | From every 1 hour to 1 upload per day |
| Excitation Methods | <ul style="list-style-type: none"> Auto Scan Capability Programmable high voltage excitation Programmable frequency sweep Intelligent frequency sweep |
| Signal Quality Evaluation | <ul style="list-style-type: none"> Sampling data quality evaluation algorithm Signal amplitude detection Signal quality evaluation |
| Temperature Detection | <ul style="list-style-type: none"> Thermistor DS18B20 core temperature detection Internal NTC in sensor Voltage |
| Barometer | Internal |
| ADC | 12-bit precision ADC converter |
| Reference Voltage | High-precision reference voltage |
| Operating Specifications | |
| Communication | |
| Modem Options | 3G, 4G, LTE |
| Power | |
| Usage | < 10mA (idle); < 150mA (operational); ~1A (3G connected) |
| Battery | 56000mAh |
| Battery Life | Years based on normal configuration |
| Battery Fuel Gauge | Coulomb Counter |
| USB Power | Can be powered through the USB connector |
| Solar Power | Can be powered through a solar adapter (recommended solar panel: 10W @ 8V-12V) |
| Environmental | |
| Operating Temperature | -40°C TO +85 °C |
| Dimensions | W 205 x L 205 x H 48 mm |
| Weight | 2.5Kg |
| Mounting Choices | |
| Mounting Bracket (Optional) | Custom mounting bracket available |

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