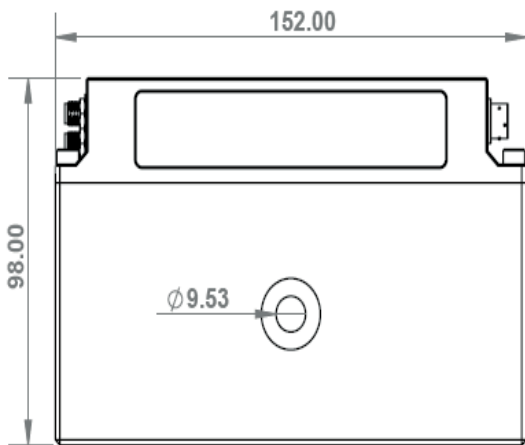


GSS 5GV Vibration Monitor

FOR STRUCTURAL AND OCCUPANT MONITORING



The 5GV is a cutting-edge MEMS Vibration and Tilt monitor that boasts exceptional precision and an integrated 3G/4G gateway, making it the ideal solution for a wide range of industries. Its user-friendly design ensures that it is easy to configure, install, and manage remotely, reducing the need for time-consuming on-site visits. Thanks to its low-power design and external power options, the 5GV minimizes maintenance activities, allowing you to focus on what really matters. With user-defined alert thresholds, you will receive notifications directly when something requires your attention.



Features

- Standalone Sensor with Internal Storage
- No Cables - Complete Wireless Solution
- Indicator LEDs – Visually Confirm Operation
- Totally Sealed Case with Magnet On/Off
- Remotely Managed and Configured via SMS, MQTT explorer
- Locally managed via Bluetooth Mobile Application or USB attached PC Application
- Real-time SMS Alerts, FTP and HTTP Uploads
- Modular Communications (Bluetooth + 4G or Bluetooth + WiFi)
- 4 x Internal D Cell Lithium Batteries
- Low Power Battery Operation
- Can Operate on External Power, No Batteries installed
- Real-Time Clock synched to Cell Tower/ NTP
- CSV/JSON/BIN Data Output, Easy GISIntegration
- Built-in Temperature Compensation

INSTALLATION

- Easy to install, no technician needed
- The description of how to install can be found at GNSS 5GV Quick Guide

Technical Specifications	
Conformance	DIN 45669-1
Management Access Port	USB serial interface, Bluetooth (BLE)
Storage	Industrial MicroSD Card - 512 MB standard or 2 GB (optional upgrade)
Time Keeping	Real Time Clock (retains time for up to 3 months), Synched to NTP / Cell Tower
Vibration Limit (X, Y, Z)	±40 g
Maximum Response	1 Hz to 1 KHz
Accuracy	±2 %
Sample Rate (Hz)	1000, 2000, 4000 samples/second
Reading interval	30 to 3600 sec
Peak Particle Velocity (by design)	0.003 mm/sec to 620 mm/sec
Peak Particle Velocity (validated)	Up to 620 mm/sec
Peak Ground Acceleration (by design)	0.003 g
Time Stamping	Down to 1 millisecond
Buffer Size	8 MB
Alerts	Thresholds: 1 to 150 mm/sec (@ 2G Range) SMS Numbers: Can notify up to 5 mobile phones
Battery type	4 x ER34615M - 3,6v /14,5 Ah (total 58 Ah) or 4 Saft LSH20D (total 52 Ah) - 3,6 v /13 Ah
Battery consumption	<ul style="list-style-type: none"> Up to 6 months in low-power mode - PPV/DF data is pushed through the 4G modem every 4 hours Up to 3 months in real-time MQTT mode - PPV/DF data is pushed through the 4G modem in real time (every 30 seconds up to every 1 hour depending on the user reporting interval set).
Structural monitoring	Peak amplitude/frequency values (1 Hz to 1 KHz) with Zero Crossing or FFT method, Peak Particle Velocity (mm/s), Peak Vector Sum (mm/s). Threshold alerts, and historical trend readings.
Human response: (coming soon)	Acceleration 1/3 octave spectrum, vibration dose values (VDV) and acceleration total value Aw(t). Threshold alerts, and historical trend readings.

Technical Specifications	
Standards (frequency ranges)	ISEE seismograph, DIN 4150:3, DIN 4150:2, BS 7385, AS 2817.2-2006, ÖNORM S 9012, IN 1226, ICPE Circulaire 1986, NS 8176 COMFORT, NS 8141 CONSTRUCTION, NS 8141-1, ISO 8569 ACC, SS 02211 SHAFT, SS 4604861 COMFORT and SS 4604866 BLAST.
Standards (weightings)	ISO 2631:1989, ISO 2631:2003, UNI 9614-2017, BS6472-2008 and VC curves
GSM Modems	EG25 (3G/4G) Global bands (uses nanoSIM) BG96 (3G/4G) Global bands (uses microSIM)
Antennas	GSM, Bluetooth, GPS (optional)
Operating Temperature	-40 °C TO +85 °C
Dimensions	W 152 x L 98 x D 41 mm
Ingress Protection	IP67
Weight	1.15 kg (with battery base)
USB/External	Power 6-pin LEMO keyed connector with metal cap (IP68) and chain
Comes with	<ul style="list-style-type: none"> • mounting bracket • USB cable • field carry bag • magnet and lanyard
Order Information NTi Audio #	600 070 000

Tilt Specifications	
Tilt Readings	Pitch $\pm 90^\circ$, Roll $\pm 90^\circ$
Resolution	0.0035°
Accuracy	+/- 0.005°
Alert Thresholds	0.05° to 70.0°
Temperature Stability	+/- 0.005° (-45° to 85°)
Stabilisation Time	10 secs
Reading Interval	10 sec to 12 hours

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