

VWHub2



SKU: GSI-VWH2-1

The VWHub2 is a simple, rugged, low-power, 2 channel stand-alone datalogger which reads most commercially available geotechnical and structural Vibrating Wire (VW) sensors and optional thermistor temperature sensors.

VWHub2 contains a large internal memory of 4MB, allowing storage of up to 50,000 readings per channel. The internal memory operates as a USB mass storage device which is accessible through a mini USB interface, allowing data to be easily transferred to a PC or mobile device via drag-and-drop.

The included VWHub2 software, enables the user to easily setup the logger parameters, such as date and time, sweep frequency range and excitation voltage.

FEATURES

- Reads two Vibrating Wire (VW) sensors and combined thermistor temperature sensors
- 4MB internal memory; reads up to 50,000 readings per channel, equating to 5 years of data sampling at hourly intervals
- IP68 rated, rugged, die-cast aluminum enclosure
- Low power consumption; 2 x D Cell batteries last up to two years
- Easy configuration and firmware upgrade via mini-USB to USB cable
- True USB interface; no special software is required; data in ASCII format can be downloaded via drag-and-drop
- Reads with user definable frequency range (450 to 6000 Hz)

BENEFITS

- Reads most types of commercially available Vibrating Wire (VW) sensors
- Optional 15V excitation ensures quality readings from sensors with long cables
- Ideal for long-term monitoring in harsh and damp environments where wired or wireless communication is not readily available
- Fast and easy setup and data download
- Versatile and economical
- Strong, durable, dust tight and immersible enclosure, all electronics sealed to protect from static and water damage

TECHNICAL SPECIFICATIONS

VIBRATING WIRE INPUTS

Sweep frequency range:
450 - 6000 Hz

Reading algorithm:
Zero crossing method

Resolution:
0.1 Hz

Accuracy:
± 0.02 % of full scale

Output (excitation) voltage:
5 V and 15 V square wave (user selectable)

TEMPERATURE INPUTS

Thermistor type:
3 k ohm thermistor

Measurement range:
50 to +150 °C / 122 to 302°F

Resolution:
0.01 °C

Accuracy:
± 0.2 °C

POWER

Power Supply:
3 V DC using two D Cell alkaline batteries

Low Battery Voltage:
2.6 V DC

Current Consumption1:
50 mA during sleep mode, up to 700 mA pulsed current during Vibrating Wire sensor reading

Battery Life:
2 years (reading 2 channels every hour)

DATA STORAGE

Memory Size:
4 MB – sufficient for 50,000 readings per channel

Interface:
USB to mini-USB

Format of reading Set:
Date/Time stamp, device serial number, logger battery voltage reading, logger internal temperature reading, sensor reading 1 (Hz), sensor reading 1 temp (°C), sensor reading 2 temp (°C), Flag

Method of Data Transfer:
Drag-and-drop (as USB drive)

PHYSICAL PROPERTIES

Size:
120 mm x 120 mm x 82 mm / 4.7.25" x 4.7.25" x 3.2"

Operating Temperature:
-20 to +60 °C / -4 to 140°F

Weight:
Enclosure only - without batteries 1.0 kg / 2.2lbs
Enclosure only - with batteries 1.3 kg / 2.9lbs

¹Actual value depends on the Vibrating Wire sensor type and the excitation voltage