

# VW MiniLogger

## MiniLogger Advantages

**Economical:** Four or five MiniLoggers can be deployed for less than the cost of a full size logger. Also, since MiniLoggers can be placed close to each sensor, it is possible to order shorter signal cables for the sensors.

**Simple to Use:** Learn how to use the MiniLogger in minutes, not hours. There are no programs to write, no switches to set, and only four wires to connect.

**Reliable:** The MiniLogger is rated for temperatures from  $-20$  to  $+50^{\circ}\text{C}$ , and its encapsulated electronics are impervious to humidity and condensation. Readings are stored in secure, non-volatile memory.

**Spreadsheet Friendly:** The MiniLogger Manager retrieves readings and stores them in an ASCII file, ready to open with a spreadsheet program. The files contain two values for each reading, a value in Hz (the raw reading) and a value in user-selected engineering units. Thus data can be used immediately in the spreadsheet.

**Wireless Option:** The wireless option provides easy data retrieval when access to the logger is difficult or when frequent retrieval is required.



## VW MiniLogger Applications

The VW MiniLogger is a reliable, low-cost data logger designed to monitor a single vibrating wire sensor, such as a VW piezometer or crackmeter. Typical applications include:

- Monitoring small projects, where only a few sensors are installed. Note that one MiniLogger is required for each sensor.
- Monitoring single sensors that are too far away to connect to a centralized data acquisition system.
- Monitoring single sensors in areas where heavy traffic or electrical noise prevents use of long cables.
- Monitoring single sensors during early phase of construction when centralized data acquisition system is not ready.

## Overview of Operation

The MiniLogger is simple to use and takes only a few minutes to set up.

Connect the MiniLogger to your computer and use the MiniLogger manager program to specify a start time and reading interval for data logging.

On site, connect the sensor signal cable to the MiniLogger and walk away. D-cell batteries provide power for up to six months in temperatures as low as  $-20^{\circ}\text{C}$ .

Return to the site to retrieve readings with your PC. Use the MiniLogger Manager program to store the readings in a ASCII file, ready for your spreadsheet.

Finally, import the ASCII file into your spreadsheet for processing and plotting.

**VW MINILOGGER**

**VW MiniLogger** . . . . . 52613310

Includes interface cable, two D-cell batteries, and a CD containing software and the user manual.

**Sensor Compatibility:** Reads VW sensors operating in the range of 450 to 6000 Hz. Also reads temperature sensors (RTD and thermistor).

**Data Storage:** Stores 8,000 records in secure, non-volatile memory. Each record includes a VW reading, a temperature reading, and the time and date. When memory is full, recording either stops or continues by overwriting the earliest readings, according to user preference.

**Logger Settings:** Assign a logger ID, specify whether to stop when memory is full or to overwrite earliest readings.

**Sensor Settings:** Assign a sensor ID, set sweep range for excitation, store calibration factors, and set temperature sensor to RTD or thermistor.

**Reading Schedule** Starts recording immediately on power up or at specified date and time. Records readings at intervals from one reading every 2 seconds to one reading per week.

**Logging Schedule:** Set logger to start recording on power up or at a specific date and time (to synchronize readings with other MiniLoggers or data loggers). Set reading intervals to day, hour, minute, and second.

**Power:** Two D-cell batteries provide power for approximately six months at temperatures from -20 to +50°C, assuming readings are taken every half-hour.

**Weatherproofing:** MiniLogger electronics are completely encapsulated in waterproof resin. Polycarbonate box has O-ring seal and cable gland for signal cable.

**Dimensions:** 100 x 100 x 90 mm high (4 x 4 x 3.5").

**Data Retrieval:** Readings are retrieved via RS-232 serial connection or by wireless link to computer running MiniLogger Manager program.

**900 MHZ WIRELESS OPTION**

**Radio Lid, 900 Mhz.** . . . . . 52613356

**Radio Base Station, 900 Mhz** . . . . . 52613450

Radio lid replaces standard lid of MiniLogger and includes spread-spectrum radio, interface cable, and half-wave antenna. Meets regulatory requirements in North America.

Base station works with PC and includes spread-spectrum radio, USB cable, half-wave antenna, and CD.

**Frequency:** 900 Mhz.

**Radio Type:** Spread Spectrum.

**Transmission Power:** 100 mW.

**Range:** Up to 1.12 km (0.7 miles) line of sight.

**Power:** Powered from MiniLogger's batteries. Average life is about 2 months, assuming 4-daily downloads. Base station is powered by computer's USB port.

**2.4 GHZ WIRELESS OPTION**

**Radio Lid, 2.4 Ghz** . . . . . 52613360

**Radio Base Station, 2.4 Ghz** . . . . . 52613455

Radio lid replaces standard lid of MiniLogger and includes spread-spectrum radio, interface cable, and half-wave antenna. Meets regulatory requirements in North America.

Base station works with PC and includes spread-spectrum radio, USB cable, half-wave antenna, and CD.

**Frequency:** 2.4 Ghz.

**Radio Type:** Spread Spectrum.

**Transmission Power:** 40 mW.

**Range:** Up to 0.6 km (0.4 miles) line of sight.

**Power:** Powered from MiniLogger's batteries. Average life is about 2 months, assuming 4-daily downloads. Base station is powered by computer's USB port.

**WIRELESS ACCESSORIES**

**Advanced Programming Cable.** . . 52613340

Advanced programming cable allows user to change configuration of radio lid. Works with both 900 Mhz and 2.4Ghz radios.

**MINILOGGER MANAGER**

**MiniLogger Manager** . . . . . Download

MiniLogger Manager software is used to set MiniLogger's reading schedule and to retrieve recorded readings. Supplied with purchase of MiniLogger. Updates to the software can be downloaded free from [www.slopeindicator.com](http://www.slopeindicator.com).

**System Requirements:** Computer with Windows 95 to XP.

**Set Clock:** Synchronize with PC or set different date and time.

**Data Retrieval:** Choose all or selected range of readings to retrieve. Store readings in default ASCII format ready for import into a spreadsheet or in format that matches CR10 data logger. VW readings are stored in Hz and also in engineering units when calibration factors have been entered. Temperature readings are stored in degrees C.