DT2040 Data Logger

The DT2040 Data Logger is a low cost, battery powered data logger, designed for reliable, unattended monitoring of up to 40 sensors which may be any mix of vibrating wire sensors and thermistors, typically 20 vibrating wire sensors with their associated thermistors and/or thermistor strings.

The DT2040 is a purpose built logger ideal for remote locations or for instruments that will require frequent reliable data recording. The DT2040 connects to all vibrating wire sensors including piezometers, crack meters, and strain gauges. However, it will not connect to vibrating wire sensors with auto resonant circuitry.

Vibrating wire sensors have unique advantages in geotechnical applications, as the frequency output of the gauge is immune to external electrical noise, able to tolerate wet wiring without signal degradation, and able to transmit the signal up to 1.6 kilometers without loss. The DT2040 can also be upgraded to include radio transmission.

Data logger setup and data collection is done using the Ultra-Rugged Field PC[2] or a laptop. Multi-Channel Host Software is also included.

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applications

Ideal for applications that require reliable, unattended monitoring of up to 20 vibrating wire sensors or 40 thermistors points.

features

HARDWARE

Robust construction.

4MB memory.

Weather resistant NEMA 4X (IP65) enclosure.

Can upgrade to include radio.

Battery powered for remote sites

100 year memory backup.

Compatible with all VW sensors - excluding those with auto resonant circuitry.

-40°C to 60°C (-40°F to 140°F) operating range.

0.01µs vibrating wire resolution.

16 bit analog/digital converter.

SOFTWARE

User friendly Windows® host software included at no additional cost.

Compatible with most spreadsheet software.

Data stores in CSV format, and opens in Microsoft® Excel.

As shown above, the DT2040 can also be equipped with an optional radio antenna to incorporate it into an RSTAR or DT LINK wireless system. RST's RSTAR system uses wireless technology to provide automated data acquisition and DT LINK allows wireless collection of data logger data in hard to access areas.

Setup the data logger and collect data using the Ultra-Rugged Field PC[2].

Screenshot of DT2040 Mobile software as shown on the Ultra-Rugged Field PC[2].

general specifications

DESCRIPTION	SPECIFICATION
Frequency Accuracy	0.002%
Thermistor Resolution	1 part in 65,000
Memory Records	- 2 CHANNELS: 303,000 records - 40 CHANNELS: 32,768 records Including: time, 20 channels frequency, frequency[2], 20 channels temperature.
Power Source	1 'D' lithium primary battery
Battery Life	Over 5 years / 2 memory fills depending on temperature and use
Communication	USB type B connector
Dimensions	349 x 305 x 165 mm (13.75 W x 12 D x 6.5 H in.)
Temperature Range	-40°C to 60°C (-40° to 140°F)
Enclosure	NEMA 4X (IP65)

data storage specifications

DESCRIPTION	SPECIFICATION
Memory Size	4 MB
Data Transfer	5,000 data points per second
Interval Mode	40 seconds to 1 day
Variable Rate Mode	16 user programmable sampling rates
Time Format	Month / day / year Hour / minute / second
Memory Full Behaviour	"Wrap around" or "fill & stop" option

ordering info

PART #	DESCRIPTION
DT2040	Data Logger
IC32000-AR2-RSTS	Ultra-Rugged Field PC[2]
Please specify the number of cable glands required.	

OPTIONAL	
RSTAR L900 - automated wireless data collection	
DT2040 DTLINK - wireless data collection	

optional equipment

Communications cable

RSTAR L900 radio option

DT LINK WIRELESS option

GEOTECHNICAL . MINING . ENVIRONMENTAL . STRUCTURAL

Certified System

ISO 9001

ELB0044E