DT2040: 20/40 Channel Vibrating Wire Thermistor Data Logger

Description

The DT2040: 20/40 Channel Vibrating Wire/Thermistor 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. Surge protection is available on each channel with ground lug on exterior of enclosure (ground rod required).

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.

Data logger setup and data collection is done using a laptop. RST's DT Logger Host Software is also included.

The DT2040 can also be equipped with an optional radio antenna (see photo) to incorporate it into an RSTAR or DT LINK wireless system.

Specifications

DT2040: 20/40 Channel Vibrating Wire Thermistor Data Logger Specifications

ITEM	SPECIFICATION
Frequency Accuracy	0.002% Full Scale
Resolution	1 part in 65,000
Memory Records	- 2 CHANNELS: Up to 303,000 records - 40 CHANNELS: Up to 32,768 records Including: time, 20 channels frequency, frequency, 20 channels temperature
Power Source	Lithium compact or standard cell battery (NOTE: standard cell required for radio use)
Battery Life	Over 4 years (non-radio) standard cell 1.5 years (non-radio) compact cell 3 years (RSTAR, standard cell) 2 years (DT LINK, standard cell) (NOTE: above specs based on 1-hour reading frequency and dependent on temperature and use)
Communication	USB Type B connector (radio optional)

Dimensions	Without mounting tabs: 349 x 301 x 162 mm(13.74 W x 11.85 D x 6.38 H in.) With mountingtabs: 349 x 301 x 175 mm (13.74 W x 11.85 D x6.89 H in.)
Temperature Range	-40°C to 60°C (-40° to 140°F)
Enclosure	NEMA 4X (IP65)

MEMORY SPECIFICATIONS

ITEM	SPECIFICATION
Memory Size	4MB
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