



Model 404

Intrinsically Safe Vibrating Wire Readout Box

Applications

The Model 404 Intrinsically Safe Vibrating Wire Readout Box can be used with vibrating wire type gauges and transducers, such as piezometers, crack meters, stress meters and others.

Specifically designed for use with Geokon Inc. sensors, it is certified for use in hazardous environments (Group I, Methane).

The user friendly Model 404 provides the following:

- Hand held portability
- Easy operation
- High accuracy and resolution
- In built rechargeable NiMH battery pack
- Operation in Hazardous atmospheres (IECEx ia SIM 13.0014X)



• The Model 404 can be held and operated with one hand



• Model 404 Intrinsically Safe Vibrating Wire Readout Box shown with standard sensor cable (supplied)

Operating Principle

The Model 404 Intrinsically Safe Vibrating Wire Readout Box is a portable, low-power, hand-held unit that is capable of running for more than 6 hours continuously on a single charge.

It is designed to read vibrating wire type sensors in hazardous environments (IECEx ia, approval SIM 13.0014X). The Model 404 is approved only for designated Geokon Inc. sensors, identified as Type 1, Type 2, Type 3 and Type 4.

The Model 404 is based on the Geokon Inc. GK-404 readout and provides 6 excitation positions (A-F) with a display resolution of 0.1 digit. It is capable of displaying the reading in either digits, frequency (Hz), period (μ s) and in the case of strain gauges (position C, D and E), in microstrain (μ ϵ).

The use of vibrating wire transducers allows highly accurate measurement for critical monitoring.

The Model 404 also displays the temperature of the transducer with a resolution of 0.1°C.

Features

The Model 404 has a sealed enclosure and a four-switch membrane keypad that can be operated with one hand. The stainless steel enclosure provides rugged protection for the internal circuits.

The 16 x 2 character LCD display allows the user to adjust backlight and contrast. The large display size makes it easy to read in all situations, while retaining hand held convenience.

Power is provided by integral NiMH cells, which are recharged away from the hazardous environment using the supplied compact charger. Power features include an automatic power-off option, battery monitor display and low battery warning. Settings are retained between power-ons.

The maximum allowed cable length between the sensor and the readout is 1000m.

This readout box does not have data storage capabilities.



- Carry case for Model 404 (included)



- Sensor cable for Model 404 (included)



- Sensor cable connection

For more information, or ordering and pricing details, contact:

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- Model 404 dimensions (shown smaller than actual size)

System Components

The Model 404 is supplied complete with standard spring clip type sensor cable, wall charger and canvas carrying case.

The carrying case will protect the readout in harsh underground environments. It includes a pouch for the sensor cable and a shoulder carry strap.

Adaptors can be supplied, allowing the use of low cost connectors on instruments in the field.

Technical Specifications

Display Resolution	(period) 0.1 microsecond (strain) 1 microstrain (Hz ² x 10 ⁻³) 0.1 digit (temperature) 0.1°C
Measurement Accuracy	(vw sensor) 0.025% F.S. (temperature) 1.0% F.S.
Timebase Accuracy	±50 ppm
Excitation Range	400 Hz to 6000 Hz, 5 Volt Square Wave
Temperature Range	-20°C to 40°C
Battery	(type) Integral NiMH cells (life) 6 hours at 20°C per charge
Weight	1020 g (excluding carry case)
L x W x H	165 x 110 x 45 mm