Vibrating Wire Readout Box

Applications

The Model GK-401 Vibrating Wire Readout Box can be used with all of Geokon's vibrating wire gages and transducers in all kinds of weather conditions. The rugged and reliable, user friendly GK-401 provides the following...

- Portability
- Easy operation
- Control via microprocessor
- High accuracy and resolution
- Waterproofed enclosure
- Rechargeable batteries
- Cold weather operation

Close-up of the Model GK-401 Vibrating Wire Readout Box control panel.

Operating Principle

The Model GK-401 Vibrating Wire Readout Box is a portable, waterproofed, battery-operated instrument for the readout of all Geokon vibrating wire gages and transducers.

Gages are read out by connecting them to the readout box using the input plug or patch cord provided. The box is switched on and set to the appropriate display setting, whereupon the gage reading is displayed on a 5-digit liquid crystal display (LCD). The instrument utilizes a low power CMOS Microprocessor to perform the function of gage excitation and readout. It also manipulates the data to provide a readout directly in engineering units (strain gages) or in units proportional to pressure, load, etc. (piezometers, total pressure cells, etc.).

Advantages and Limitations

The microprocessor utilizes an ultra-stable 6 MHz quartz oscillator for control and timing functions.

The gage is plucked or excited by a swept square wave frequency pulse and senses the period of vibration of the return signal to a resolution of 0.1 microseconds. A program function for reading weak gages is provided automatically.

There are five separate switch positions for different readout functions.

● *Model GK-401 VW Readout Box.*

System Components

The instrument features a 5-digit display, automatic shut-off for battery conservation, rechargeable battery and a construction incorporating water-proof seals on the face plate and all switches and input plugs.

Cold weather operation is allowed by use of special components and LCDs. A carrying strap is provided for easy portability. A battery charger is supplied with the instrument (115 V is standard, 230 V is optional).

A backlit display and audio output of the gage signal are available as options.

Technical Specifications

Excitation Range	400 Hz to 6000 Hz, 5 Volt Square Wave
Measurement Resolution	0.1 µs
Timebase Accuracy	±50 ppm
Temperature Range[1]	–10°C to +50°C
Battery (Rechargeable)	*(type)* Nickel Hydride 7.2 V, 3 Ah *(life)* 10 hours *(charger[2])* 115 V ±10% 50-60 Hz
Weight	2.25 kg
L × W × H	165 × 100 × 215 mm

[1]Low temperature versions (to –30°C) available on request.
[2]A 230 V charger is available as an option.

GEOKON

The World Leader in Vibrating Wire Technology™

Geokon, Incorporated
48 Spencer Street
Lebanon, NH 03766
USA

1 • 603 • 448 • 1562
1 • 603 • 448 • 3216
geokon@geokon.com
www.geokon.com