

"DIGIPLUCKER" (VW - Digital Interface Unit)

Features:

- ▲ Inexpensive and versatile solution for VW sensors
- ▲ Allows VW sensors to interface with MIU, SLUG data-loggers and DESTINY networks
- ▲ 500-6000Hz (0-5Vdc) square wave sweep.
- ▲ Temperature output from thermistor.
- ▲ Digital Frequency modulated output signal Output signal can be transmitted over 1 km.
- ▲ Improved firmware algorithm for faster + more reliable readings.
- ▲ Plug 'n Play

The *DigiPlucker* is a small, low cost units that enables YieldPoint's digital peripheral components to read (MIU or SensorSync for PalmOS device), store (SLUG) or transmit (DESTINY) data from vibrating wire (VW) transducers such as load-cell, stress cells and piezometers. The user simply connects the leads of the VW sensor to a terminal block housed inside the unit and then treats the sensor like any other YieldPoint sensor. The unit outputs the temperature recorded by the thermistor in °C (0.1°C resolution) and the period of vibration of the wire in μ S (0.1 μ S resolution).

Using the MIU it is possible to quickly read the transducer. Using the SLUG or SLUG-4 it is possible to log data from 1 or 4 VW sensors for a 100 day period. Using DESTINY it is possible to transmit from up to 128 VW sensors using an RS485 network which, itself, can interfaced with existing mine-wide communications infrastructure such as (i) leaky feeder wireless, (ii) Ethernet or (iii) seismic systems).

The output signal from the *DigiPlucker* is a frequency modulated 0.5V square wave that can be transmitted over 1 km. An optional RS485 (Modbus ASCII protocol) version is available.



DigiPlucker interfaced with a VBS-2 stress cell & the MIU



DigiPlucker interfacing a VBS-2 stress cell with a SLUG data-logger

Applications

- ▲ Monitoring VW stress cell, load cells peizometers.
- ▲ Reading VW transducers using a PalmOS device
- ▲ Datalogging (SLUG) from VW transducers
- ▲ Networking VW (DESTINY) transducers for data transmission to central location.

Specification

Core Technology: 20MHz microcontroller providing "pluck and Listen" functionality.

VW Frequency Range: 500-6000Hz. 0.5V square wave excitation

Output Signal: CMOS + TTL compatible 0-5V square wave train. Optional RS485 (Modbus ASCII version)

Accuracy (F.S.): 0.05% F.S.

Resolution: Temp: 0.1°C VW transducer: 0.1 μ s