

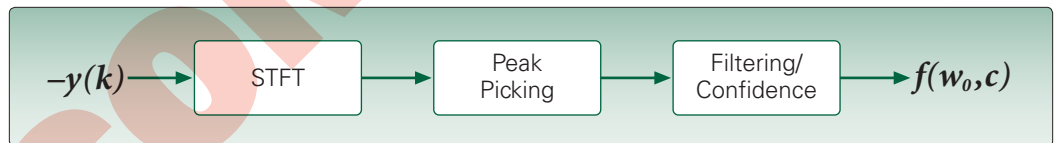
Vibrating Wire Digital Signal Processor

Features

- High Performance Vibrating Wire Gage Signal Processing
- Compatible with a wide range of sensors
- Reliable vibrating wire gage measurement
- Programmable gage characteristics
- Low power operation from 12V
- Supports signal re-transmit such as 4-20 mA
- High performance (40MIPS) processing
- Easily integrates with existing CR10 systems DSP VW Interface



• Model 8020-47 DSP Vibrating Wire Digital Signal Processor.



• Digital signal processing technique used to ensure correct initial measurement.

Operating Principle

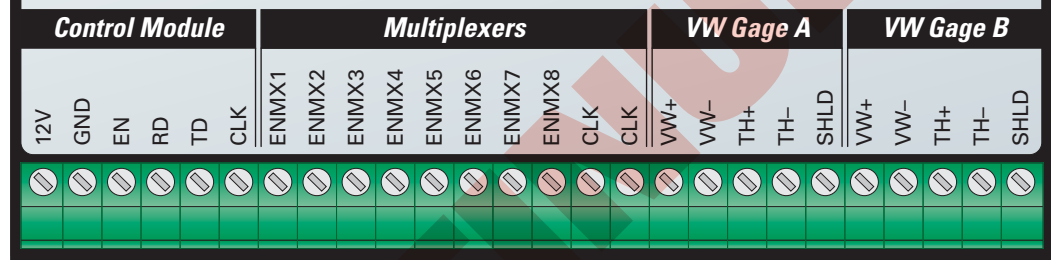
The Geokon DSP interface is designed to be used with Geokon vibrating wire instruments for the elimination of spurious noise effected readings such as those caused by high voltage electrical cables, electrically induced "spikes", and other forms of electrical interference.

The digital signal processor removes the "false" data by using proprietary techniques of digital filtering. This system is ideal for unattended data acquisition systems where alarms may be triggered by preset threshold values. This device adds another degree of certainty to the processed data form vibrating wire instruments.

The DSP-VW system incorporates state-of-art digital signal processing techniques to effectively ensure that a proper measurement is obtained initially. This is accomplished by using a Short Time Fourier Transform (STFT), a peak picking and tracking process and finally a non-linear median filter set to remove the wild points. The approach is illustrated above.



VW DSP Interface



• Model 8020-47 Vibrating Wire DSP Interface.

Technical Specifications

| | |
|------------------------|---------------------------------|
| Controller | Motorola 16-bit 56L811 |
| Program Memory | 32K Flash |
| Data Memory | 32K SRAM |
| Measurement Range | 100-6000 Hz |
| Measurement Resolution | 100 ns/cycles counted |
| Algorithm Resolution | 0.2 Hz |
| Algorithm Accuracy | 0.02% F.S. |
| Excitation Range | 100-6000 Hz |
| Operating Power | 12V @ 60 mA |
| Quiescent Power | 0.2 mA |
| Temperature Range | -40°C to +60°C (no display) |
| Dimensions (L × W × H) | 200 × 250 × 175 mm (with cover) |



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