



# Vibrating Wire Spectral Analysis Technology



- Eliminate noise spikes, false alarms
- Patented spectral analysis
- Have confidence in your measurements





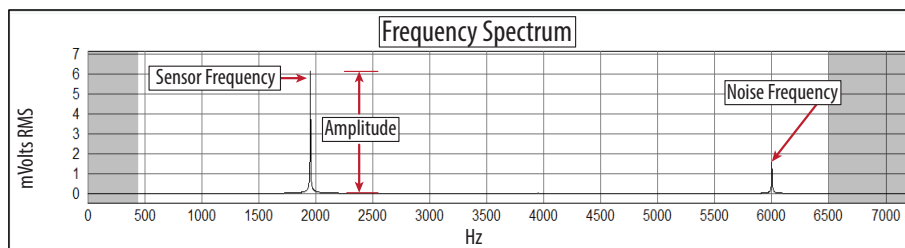
## Vibrating Wire

Spectral Analysis Technology

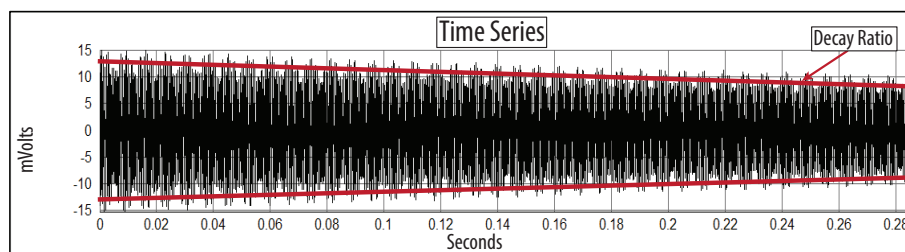
So....  
What is



VSPECT provides the best vibrating wire measurement available. A sensor frequency is easily identified while filtering out environmental and electrical noise that affects the quality of other vibrating wire readers. VSPECT provides measurement diagnostics to understand sensor response, installation quality, and identify incorrect wiring or damaged sensors.



VSPECT technology determines the sensor frequency from the Frequency Spectrum while ignoring noise signals.

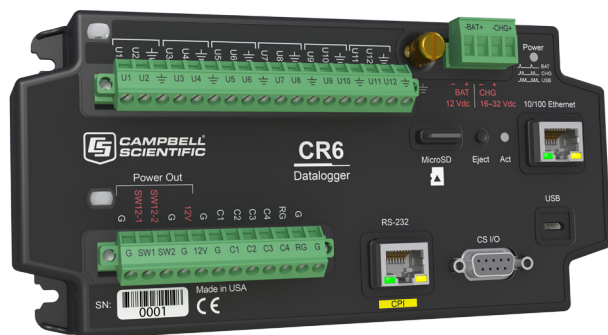


Traditional vibrating-wire readers determine the sensor frequency from the Time Series where signal and noise can't be distinguished.

### VSPECT Outputs

- › **Sensor Frequency**  
(frequency of peak response)
- › **Amplitude**  
(signal strength)
- › **Signal-to-Noise Ratio**  
(measurement quality)
- › **Noise Frequency**  
(largest observed noise)
- › **Decay Ratio**  
(signal attenuation)
- › **Thermistor, if present**  
(Ohms or temperature)

## CR6 Measurement and Control Vibrating-Wire Datalogger



The CR6 measurement and control datalogger revolutionizes data acquisition systems. It is smaller, faster, lighter, and more powerful than our previous systems with 24-bit resolution and VSPECT vibrating-wire analysis. The CR6 has what it takes to be the core of any system.

### Benefits and Features

- › Onboard VSPECT vibrating wire measurements
- › Supports dynamic vibrating wire measurements with CDM-VW300 series
- › Cost effective
- › U-terminal configurable to what you need: analog or digital, input or output
- › Integrated charge regulator
- › Ethernet 10/100
- › MicroSD card slot
- › Removable terminal blocks
- › Multiplexer expandable
- › CRBasic Programmable
- › Built-in Wi-Fi and RF options

<sup>a</sup>The VSPECT technology is protected under U.S. Patent No. 7,779,690.

questions & quotes: 435.227.9120

[campbellsci.com/vibrating-wire-interfaces](http://campbellsci.com/vibrating-wire-interfaces)





# CRVW3 3-Channel Vibrating Wire Datalogger

The CRVW3 is a self-contained, low-cost, three-channel vibrating wire datalogger. It is designed to be an independent datalogger, or a component of a larger radio-linked data acquisition network when configured with available wireless communication options.

The CRVW3 can be purchased factory integrated with a power supply and a weatherproof enclosure, or purchased as a stand-alone datalogger for situations where a custom enclosure and/or battery combination is desired.

## Benefits and Features

- Reads and stores data from one to three vibrating wire sensors
- Charge regulator included for solar panel connection
- Enclosure rated to IP66
- Simple programming interface
- Integrated rechargeable or alkaline battery options
- Compatible with many existing Campbell Scientific data acquisition networks
- PakBus router/radio repeater capabilities
- Available with multiple radio options for worldwide use
- CRVW3-NE for unique power and enclosure applications



# WV ANALYZER Vibrating Wire Analyzer

Campbell Scientific's vibrating wire analyzer brings new capabilities to VSPECT technology. The graphical display allows you to see and understand how the sensor is working, troubleshoot sensor installation in the field, and get real time results of system performance. With our PDF document generator, the vibrating wire analyzer lets anyone create as-built printed or electronic documentation of installation or traditional field visits.

## Benefits and Features

- Generates field calibration sheet and installation record
- Works with all vibrating wire gages
- Graphical display of VSPECT vibrating wire measurements
- Sensor troubleshooting
- Integrated GPS, takes you to the sensor location
- Reports measurement frequency, quality and competing noise
- Geolocates stored readings
- Field replaceable batteries
- Field ready



Printable Reports

# CDM-VW305 8-Channel Dynamic Vibrating-Wire Interface



The CDM-VW305 is an 8-channel VSPECT vibrating wire module that allows high speed simultaneous vibrating wire measurements with traditional vibrating wire gages. Several CDM-VW305 modules can be connected to a single CR6 datalogger for a large channel count system; modules can be strategically located near sensors reducing cabling and installation costs without compromising measurement quality. Also available is a 2-channel model (CDM-VW300). U.S. Patent No. 8,671,758.

### Benefits and Features

- Revolutionary VSPECT dynamic vibrating wire measurements
- 8-channels with 1 to 333 Hz measurement speed
- Simultaneous measurements
- Use traditional vibrating wire sensors
- Replace eight sensor cables with a single CAT5e cable
- Retrofit existing installations with dynamic capabilities

## AVW200-Series Vibrating Wire Interfaces

The AVW200-series interfaces are the proven standard for vibrating measurements with over 10,000 installations worldwide. They allow traditional dataloggers (CR800, CR850, CR1000, and CR3000) to use the VSPECT technology for the best vibrating wire measurement possible since 2007.

### Benefits and Features

- 2 channels for static vibrating measurements
- Multiplexer expandable channels
- Patented VSPECT technology
- Wireless communication options



## Comparison Table

Model	Solutions	USB Configuration	Ethernet	Expandable Memory	Wireless Communications	Channel Count	Multiplexer Capable	Static VW	Dynamic VW	GPS	Power Input
CR6	Fully functional datalogger with on-board vibrating-wire measurements	✓	✓	✓	Wi-Fi and radio options	12 universal, (3 to 6 vibrating wire)	✓	✓	with CDM-VW300 Series		12 to 32 Vdc
CRVW3	3-channel stand-alone vibrating-wire datalogger	✓			Radio options	3 vibrating wire		✓			12 to 28 Vdc
VwAnalyzer	Handheld field and reporting tool	✓				1 vibrating wire		✓		✓	5 AA batteries
CDM-VW300 Series	Dynamic vibrating-wire analyzer	✓				2 or 8 vibrating wire (depends on the model)	Other CDMs	✓	✓		9.6 to 32 Vdc
AVW200 Series	Datalogger expansion module with radio option				Radio options	2 vibrating wire	✓	✓			12 Vdc