

### 8-Channel Variable Frequency Periodic Voltage Monitor Signal Conditioning Card



#### Applications

- Flight test instrumentation
- Aircraft power generation systems
- Research measurements and experiments

#### Features

- 8-channel, variable frequency periodic voltage monitoring
- Wide input frequency range, 32Hz to 1000Hz
- Programmable selection of voltage, frequency and phase measurements including:
  - For each channel: Raw, peak positive, peak negative, peak to peak, average, RMS and DC level voltages; period; frequency; Total Harmonic Distortion (THD)
  - Additional measurements: Phase shift between channels 1 and 2, channels 1 and 3, channels 1 and 4, channels 5 and 6, channels 5 and 7, and channels 5 and 8
- Fixed analog anti-aliasing filter, 7.5KHz frequency cutoff with 5-pole Butterworth response
- Programmable channel gains
- AC and DC input coupling
- Zero calibration and DC voltage substitution calibration
- Input voltage range:
  - VMC-108V-1 Module: Accepts input voltages to 206V<sub>RMS</sub>
- ±0.5% system accuracy
- Automatic parasitic offset correction on power up and ZCAL. This feature can be disabled
- ±400VDC overvoltage protection
- Microsoft Windows application software included

#### Description

The VMC-108V is a variable frequency (32Hz to 1000Hz) periodic voltage monitor signal-conditioning card for use in EDAU/CDAU/WDAU-20xx products. The card provides capability for monitoring up to eight (8) variable frequency (32Hz to 1000Hz) voltage inputs of up to 206V<sub>RMS</sub>. Each channel provides calibration, programmable gain, and fixed presample filtering. The conditioned analog signals are digitized at up to 14-bit resolution and used as the basis for a series of DSP-based voltage, frequency and phase measurements that are available for transmission in the system PCM output format. Most measurements are updated at a rate of 15 to 20 updates per second, depending on the input frequency.

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#### VMC-108V Datasheet

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 System  
 AS9100C  
 ISO 9001:2008