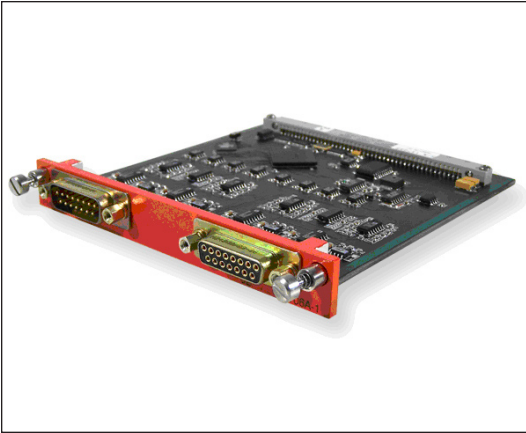


3-Phase Power Quality Monitor Signal Conditioning Board



Applications

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

Features

- 3-phase variable frequency power quality monitoring
- Wide input power frequency range, 32Hz to 1000Hz
- Programmable selection of power quality measurements including:
 - **For each phase:** Raw, peak positive, peak negative, peak to peak, average and RMS voltages and currents; phase real power, phase apparent power, phase power factor phase period; Total Harmonic Distortion (THD) on voltage channels
 - **Additional 3-phase measurements:** Phase shift from phases 1 to 2 and phases 1 to 3; Average 3-phase real power
- Fixed analog anti-aliasing filter, 7.5 KHz frequency cutoff with 5-pole Butterworth response
- Programmable channel gains
- Programmable AC and DC input coupling
- Zero calibration
- Programmable amplitude 400 Hz sinusoidal substitution voltage
- Accepts sinusoidal input voltages up to $206 V_{RMS}$ ($\pm 291 V_{PEAK}$)
- Current channel inputs to $+10.24 V_{DC}$ from off-board current transformers
- $\pm 0.5\%$ system accuracy
- Automatic parasitic offset correction on power up and ZCAL. This feature can be disabled
- ± 400 VDC overvoltage protection on voltage channels; ± 35 VDC overvoltage protection on current channels
- Microsoft Windows application software included

Description

The PMC-106V is a 3-phase variable frequency power monitor signal-conditioning card for use in TTC's EDAU-20xx, CDAU-20xx or WDAU-20xx series products. The card provides capability for monitoring up to three (3) variable frequency (32 Hz to 1000 Hz) voltage inputs of up to $206 V_{RMS}$ sinusoidal ($\pm 291 V_{PEAK}$) and three (3) variable frequency (32 Hz to 1000 Hz) current inputs (using off-card current transformers). 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 measurements of power quality that are available for transmission in the system PCM output format. Most power quality measurements are updated at a rate of 15 to 20 updates per second, depending on the input power frequency.

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PMC-106V Datasheet

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Specifications subject to change without notice.



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