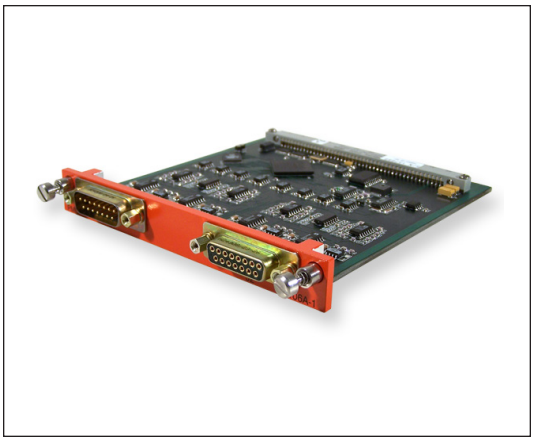
TELETRONICS
A Curtiss-Wright Company

PMC-106A Datasheet

3-Phase 400 Hz Power Quality Monitor Signal Conditioning Board



Applications

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

Features

- 3-phase 400 Hz power quality monitoring
- ADC sample frequency phase locked to power frequency X128
- 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 and phase Total Harmonic Distortion (THD) (voltage channels)
  - Additional 3-phase measurements:
    Phase shift from phases 1 to 2 and phases1 to 3; average 3-phase real power
- Fixed analog anti-aliasing filter, 8 KHz frequency cutoff with 5-pole Butterworth response
- Programmable channel gains
- AC and DC input coupling
- Zero calibration
- Programmable amplitude 400 Hz sinusoidal substitution voltage
- Accepts input voltages to 140 VRMS
- Current channel inputs to +10 VDC from off-board current transformers
- ± 0.5% system accuracy
- Automatic parasitic offset correction on power up and ZCAL. This feature can be disabled
- ±300 VDC overvoltage protection on voltage channels ±35 VDC overvoltage protection on current channels
- Microsoft Windows application software included

Description

The PMC-106A is a 3-phase 400 Hz power monitor signal conditioning board for use in TTC's EDAU-20XX, CDAU-20XX or WDAU-20XX series products. The board provides capability for monitoring up to three (3) 400 Hz voltage inputs of up to 140 VRMS and three (3) 400 Hz current inputs (using off-board current transmitters). 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. Power quality measurements are updated at a minimum rate of 25 measurements per second.

CAIS Compatible

DEKRA Certified — Management System AS9100C ISO 9001:2008

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