

MIRO Class A Power Quality Logger and Analyzer

Australia's first Class A Power Quality Analyzers designed and manufactured in Australia by CHK Power Quality

The **MIRO** Class A range of portable power quality recorders are precision instruments that offer comprehensive and reliable compliance monitoring of low voltage circuits. Built for high performance, toughness and focus on ease of use, the MIRO range are the workhorse instruments of choice for a variety of power monitoring applications including power quality analysis, supply compliance checks and voltage investigations, power flow studies, energy audits, renewables, railway systems and transformer monitoring.

Models

- PQ35 (3 voltage and 4 current channels);
- PQ45 (4 voltage and 4 current channels); and
- PQ45-1k (4 voltage and 4 current channels, 1000V)

Key hardware features

- Certified to IEC61000-4-30, Class A
- Compact design to meet applications for the modern marketplace and where space and accessibility are restrictive.
- AC and DC voltage and current measurements.
- Isolated voltage inputs (each channel has its own neutral) facilitate various wiring configurations.
- Two temperature channels.
- Expansion port allows for system expansion to include additional sensors, input/output controls and custom interfaces which broaden the PQ system platform. Example interfaces include DGA, Hydrogen and Bushing monitors.
- All weather conditions: rugged, shock resistant, portable and weatherproof (IP66).
- All local (WIFI) and remote communications options (3G/4G) are integrated within the enclosure - no additional peripherals required other than an external antenna. Ethernet with RJ45 port (option) available.



Figure 1: MIRO PQ35 - Three phase power quality logger and analyzer

- Safety
 - Voltage transients: Minimum CAT IV 600V
 - > 10kV isolation to ground
 - > 10kV isolation between voltage channels
 - Detachable voltage and current leads
 - Voltage leads independently certified to CAT IV 600V (PQ45 and PQ45-1k only)
 - Reinforced insulation / double insulated
- GPS included as standard, only requires an external GPS antenna.
- Powered from Phase A to Neutral (PQ35 and PQ45 only) or an external DC. The PQ45-K1 is powered from external DC only.
- Graphical color display
 - Voltage and current waveforms.
 - Phasor diagrams; Measurements; and
 - User defined screen.
- Internal backup battery: 5 minutes back up time as standard, with option to extend upon request.
- Starts logging on power up.
- Gapless logging: User can download data, clear log memory and configure the device with no interruption to logging.
- Mains signaling included as standard.
- Secure protocols: DNP3.0, and Automatic FTP uploads.

Get more Work from your Power

- Concurrent logging at multiple log intervals: 10/12 cycles, 150/180 cycles, 10s, 10m, 2h, and user settable.
- Logged memory: 8GB.
- Accessories
 - PowerMonic PM35 and PM45 accessories can be used with the PQ35 and PQ45 models respectively.
 - No external power required for DC current clamps.
 - Two temperature probes as part of the standard kit.
 - Protective holster as part of the standard kit.
- Online monitor, with event trigger option (ideal for motor starts).
- Configurations
 - Pre-defined configurations for easy setup.
 - Create and store different configuration files for quick retrieval.
- View different log file data on the same graph to compare PQ measurements (use GPS to time synchronize loggers).
- Analysis and Compliance reporting
 - Voltage compliance profiles available.
 - User definable voltage compliance profiles.
 - Harmonic compliance report available.
 - Energy; Daily Min/Max; ITI (CBEMA) curve.
- Customized reports (available upon request).



Figure 2: MIRO PQ45 - Three phase power quality logger and analyzer in holster (Matte black)

Key software (CITRUS) features

- The CITRUS platform is powerful, easy to use and intuitive application software that supports all CHK PQ products. It provides tools for: device management; data analysis; and reporting.
- Event type filter included, to view desired events.

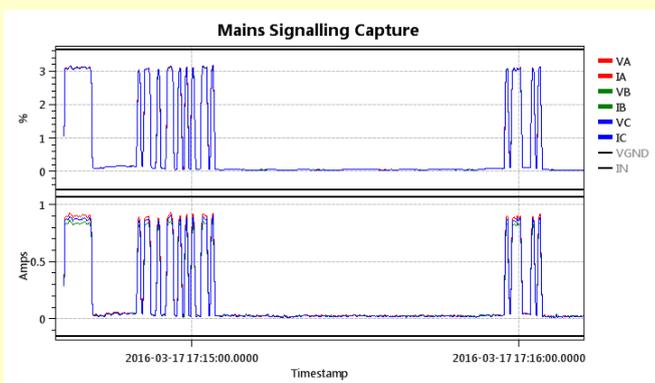


Figure 3: CITRUS - Event - Mains signaling capture

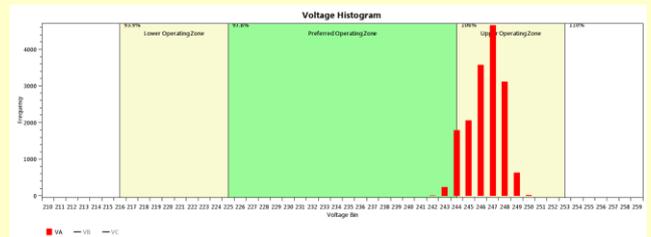


Figure 4: CITRUS - Voltage compliance report as per AS61000.3.100

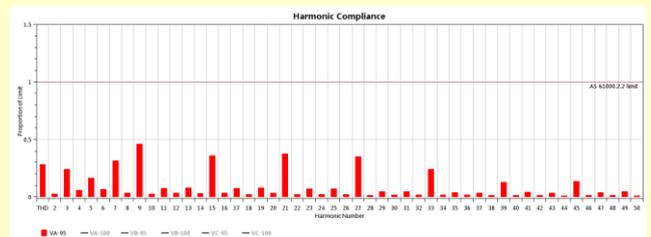


Figure 5: CITRUS - Harmonic compliance report as per AS61000.2.2

- Views
 - Ability to edit an active view: Text and arrow annotation and title options available.
 - Generate a PDF, CSV file, or table.
 - Save and Print view.
 - Split or combine voltage and current graphs.
 - Multiple measurements on a single graph.
 - Horizontal and vertical cursors; Horizontal and vertical axes zooming functions.