

PQube[®] AC Power Monitor

Embedded power quality and energy/carbon monitoring

Robotics applications

Robots connected to industrial electric power are often hit by power disturbances: voltage dips, swells, interruptions, impulses, frequency variations, harmonics. These power quality events cause difficult-to-diagnose intermittent failures that range from questionable movements to catastrophic destruction of product or even the robot itself.

The PQube detects and records all of these power quality events. It reduces your service costs by assigning responsibility for intermittent failures. It also lets you flag questionable product for additional quality checks, or orchestrate a controlled shutdown to avoid product or equipment damage.

PQube Power Quality monitoring.

- Unexpected intermittent robot failures can be disruptive, expensive, and difficult to diagnose: was it a loose cable, a software bug, an operator error, or a power disturbance? Your PQube captures all power disturbances, and temperature/humidity excursions too.
- Your PQube instantly attributes (or rules out) power quality events as the cause of intermittent robot failures.
- If the problem is power quality, your PQube helps determine if it caused by the electrical supply from your electric company, or problems within your facility wiring.



PQube Energy monitoring.

- Want to save energy? Start by monitoring it. Often simple changes to robot control software can improve energy efficiency.
- Avoid peak charges from your utility: smooth out energy usage, and reduce peak cost periods.
- Get daily, weekly, and monthly energy consumption trends, in easy-to-understand pictures.
- Detect developing leaks, failing motors, and more – help prevent robot failure by looking at energy consumption over time.
- Determine if you can operate more robots without increasing your electrical system.

What makes the PQube so different?

- By far the most user-friendly monitor on the market – even does carbon footprint calculations for you!
- Tiny - smallest full-featured monitor ever. Perfect for embedding in robot controls.
- Low cost – payback time typically measured one or two avoided service calls.
- Accurate – world-class accuracy means you won't miss any power quality events. Get energy data reliable enough to measure any improvements.
- No software required - no learning curve, no up-front expense, no annual licensing costs.
- Works right out of the box - just connect it to your power. The PQube automatically figures out your robot's power configuration, and immediately starts recording disturbances, trends, and statistics.
- Easy to understand – pictures and spreadsheet files are generated straight from your PQube.
- Works with or without a network:
 - No network? No problem! Your PQube gives you all its data on an SD card, just like a digital camera. A pair of relay contacts lets you integrate power information from your PQube into your robot control algorithms for things like automated product flagging or controlled shutdown.
 - Network available? Great! With its ETH1 module, your PQube will send you an email every time it has interesting data. IT department willing to help with firewalls and setup? Even better! Use your PQube's built-in web server and FTP server for easy access to data.



PQube – it's worth a closer look!

www.PQMeterStore.com