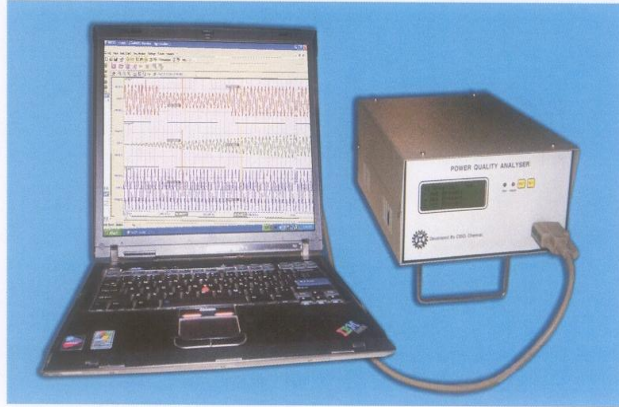


POWER QUALITY ANALYSER (PQA)

A perfect power supply would be one that is always available, always within voltage and frequency tolerances, and has a pure noise free sinusoidal wave shape. Naturally, long power interruptions are a problem for all users, but many operations are very sensitive to even very short interruptions, harmonics, transients and unbalance. Voltage sags and power interruptions lasting a few hundredths of a second can be costly. Analysis of power being received is hence very important particularly in industries. Poor quality of power may result in breakdowns and consequent production loss.



CSIO Chennai centre developed a low cost power quality analyser based on the state of the art Digital Signal Processors. The industry needs to know its power supply quality by means of a tool, which takes the inputs and quantifies the power quality parameters at an affordable cost. PQA will help to take corrective steps for improving the power quality of the supply, which in turn will reduce the down time and increase the productivity

Applications:

Power quality analyzer is useful in safeguarding the industries such as arc furnaces from penalties by taking appropriate steps. It provides detailed running data including voltage, current, frequency and harmonics. It is also useful for identifying the causes of equipment failures in critical sectors such as health, IT, ceramic/ glass industries etc. Continuous monitoring of the power quality parameters provides valid data for justifying the investment in improving the power quality of the distribution system. The intelligent use of real-time power quality measurement can definitely lead to pre-empting the possibilities of specific industrial breakdowns.

Specifications:

Power Quality Events:

Impulse	: Amplitude 425 V Peak
Transient	: Duration 50 μ s to 2.5 ms
Sag	: Amplitude (10 to 90% of nominal value) Duration > 10 ms
Swell	: Amplitude (above 110% of nominal Value) Duration > 10 ms
Harmonics:	up to 100 th Harmonic measurable
Max Harmonic	: 5 KHz (100*50Hz) frequency
Harmonic Distortion	: Individual and Total Harmonic Distortion in %
Phase Sequence Detection	: Positive, Negative & Zero Detection
Unbalance Ratio	: Voltage Ratio in %

Basic Parameters:

Voltage	: 300V RMS/ Phase
Current	: 5A RMS / Phase
Power Factor	: ± 1 / Phase
Powers	: Active, Apparent & Reactive Power / Phase
Display	: 4x20 LCD
Keys	: Increment / Decrement keys To select pages.
Serial Interface	: RS232 Connection (MODBUS-RTU protocol)
Power Supply	: 240V, $\pm 20\%$, 50Hz

