POWER QUALITY ANALYSIS, FAULT IDENTIFICATION, ENERGY MANAGEMENT, Data logging

Power quality problems causing expensive equipment failure, fast speed production plants stopping causing expensive production losses, breakdowns?

Suspect that problems are originating from bad voltage from the supply authority & need proof?

We have the latest, top of the range power quality analysis instrument & data loggers as well as the personnel to use & relate analysis to problems in order to isolate & resolve these.

Power quality analysis, inspection will pin point where very short time occurring faults & voltage, current, power issues originating from either the power utility or internally that conventional instruments/data loggers are unable to capture

Modern high speed/high tech plants are very susceptible to short time power/voltage issues that result in expensive losses.

The only way of "seeing" these faults is with the high end analysis instruments we have.

We have a range of all the different probes/sensors to cover for all situations including DC.

We also have data loggers so that captures at different points/DB's etc. can be captured simultaneously for comparison in the same time frame which is especially useful for energy management/losses

Functions

- Captures & record all parameters, transients, alarms & waveforms **simultaneously**
- Long Inrush - over 10 minutes! Helps to size the electrical installation correctly
- Measures **5 voltage & 4 current inputs**! (Other analyzers measure 3 & simulate calculated values that cannot show losses such as to earth etc.)
- Capture of waveforms for hundreds of transients lasting several tens of μs (millionths of seconds)
- Calculation of Pst (short-term flicker) & Plt (long-term flicker) values
- Monitoring of the electrical network with setting of alarms
- Real-time display of wave forms (4 voltages and 4 currents)
- Half-period RMS measurements of voltages and currents
- Measures all the necessary V, I, power parameters for full diagnosis. Direct current, ac readings to over 10,000 amps
- Measurement, calculation and display of harmonics up to the 50th order,
- Display of phasor diagram

- Measurement of P, Q, S and D power values (total and per phase)
- Energy measurement (total and per phase)
- Calculation of the K Factor & FHL
- Calculation of distorting voltages and currents
- Calculation of the cos φ displacement power factor (DPF) and the power factor (PF)
- Unbalance calculation (current and voltage)
- Back-up and recording of images and data
- Recording and export to PC
- All types of electrical networks, from the simplest to the most complex
- Energy values, including tons oil equivalent
  Wide variety of units available: kW, Joule, nuclear toe, non-nuclear toe, BTU, etc.
- **UPS, Inverter efficiency**, battery run time calculation (Battery DC voltage/current/power, AC voltage/current/power)-useful for working out battery capacity available
- **Distorting power**
  1. Breakdown of the reactive power values, with the concept of non-active power (N), distorting power (D) and reactive power (Q & Q1).
  2. Breakdown of the reactive power to find the distorting power linked to the harmonics (VAD).
  3. Distorting power for sizing the harmonic filters.
  4. Reactive power (var) of the fundamental for sizing the battery of the power correction capacitor.
- **Harmonics**
  1. Harmonic currents flowing in a network lead to increased losses in the windings. This results in heating of the transformer and reduces the life span of the instruments connected.
  2. All the useful parameters are measured: global THD and per phase on U, I, V and VA, phase offset of harmonics.
  3. Calculation of the harmonics in %f and %r
  4. Decomposition of the harmonics on the neutral conductor
  5. Calculation of the distorting voltages and currents
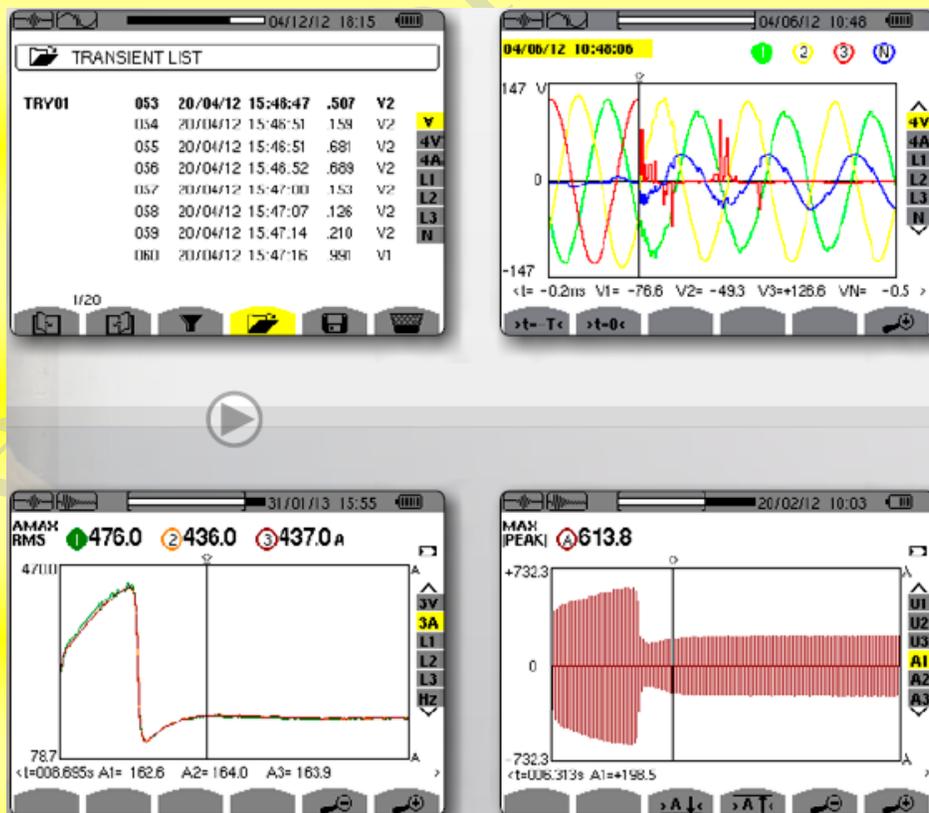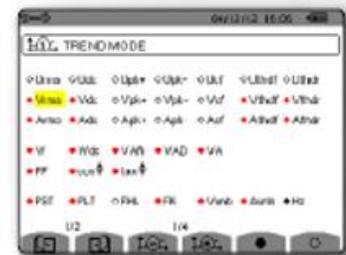
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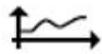
📈 Recording mode

- More than 450 recordable values with all the required parameters and graphic display.
- Programmable recording period and storage rate.

New! Quick start-up:

- **Immediate start of recording**
- Automatic indication of Min/Max values
- Auto-completion of measurement campaign names

🔔 Alarms mode

- **Up to 40 alarms can be set simultaneously!**
- Threshold overruns to be monitored can be configured during set-up.
- For each alarm threshold overrun, a time/date-stamped recording of the event is made with the duration and the extreme values.
- Possibility of modifying the end dates for programmed alarms.

〰️ Transients mode

- Capture of events on the voltage and current with triggering according to thresholds.
- **Capture of hundreds of transients.**
- Display of events as short as a few tens of μs.
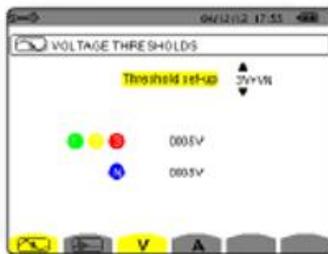
Inrush & TrueInrush

- Monitoring of the Inrush current for a load when it is powered up.
- **Records the currents, voltages and frequency.**
- For correct sizing of electrical installations.
- To view source switching faults.

We have a full selection of power quality & data logging options, sensors both AC & DC