What is Full Disclosure Technology?

Full Disclosure Technology is built into all Fluke and RPM three-phase power quality instruments. This technology makes the InSite Power Recorder a unique, professional instrument that increases your ability to maintain and troubleshoot your plant’s power quality.

- The sampling system processes every cycle on all channels, recording min/max values and looking for sags, swells or waveform faults.
- The system can store 6000 events in each of two measurement sessions, for total storage of up to 12,000 events. You can see everything from sub-cycle events to long-term outages with clear detail.
- Records power parameters, rms voltage, rms current, harmonics, flicker and monitors for power quality events — on all channels simultaneously without having to reconfigure.
- No need to set thresholds. You won’t be disappointed by missed events or a memory full of noise.
- Because there are no thresholds to set, Full Disclosure Technology system records any changes in measurements, even the ones that are almost out of tolerance.

Full Disclosure Technology lets you plot events on any power tolerance curve. CBEMA, ITIC, and ANSI curves are included, or create your own.

Full Disclosure Technology captures thousands of voltage events and related current information, without having to set thresholds.
InSite Power Recorder™ puts full disclosure in a compact package, designed to be installed at critical locations throughout a facility. Use this recorder to monitor incoming and internal power at data centers, manufacturing plants, or commercial buildings. Everything you want to know is measured and analyzed on all channels using Full Disclosure™ technology. When used with Scenario® software, the InSite Power Recorder enables you to take corrective action and avoid costly disruptions.

Includes easily accessible terminal strips for voltage and current connections.

- 4 voltage channels – three phases plus neutral-to-ground.
- 5 current channels allow you to monitor neutral and ground current in addition to phases
- Rugged, die cast metal enclosure, designed to handle a lifetime of use
- Ethernet interface makes downloads fast and easy
- Capture up to 6,000 voltage events with simultaneous current, in two monitoring sessions
- Measure and record Volts, Amps, frequency, Watts, VA's, VAR's, power factor, demand and harmonics using 128 samples per cycle – on every cycle
- Supports single-phase, wye, delta, split phase, high-leg delta, open-leg delta, and other common power systems.
- Model 901 includes built-in current transformers for direct, in-line connection to CT metering circuits found in substations and switchgear.

Real-time waveform displays show up to 9 channels (4 voltage, 5 current) including ground and neutral current.

Trend windows give you an overview of power parameters – fast. Measurements are processed for every cycle. Min, max and average values are plotted so you can quickly see the worst-case.

Real-time meters and vectors for Watts, VA, VAR, pf and dPf.

Track demand using averaging intervals from 5 minutes to 1 hour.

Display harmonics up to the 63rd as a spectrum or table.
Standard InSite Measurement Features

Basic Functions
- Logging RMS voltage and RMS current on all channels
- Phasor diagrams
- Frequency trends
- Real-time oscilloscope display of voltage and current on all channels

1652 Power Consumption (included)
- Watts and demand trends
- KWH, individual phases and total
- VA and VAR trends
- Power Factor trends, true and displacement
- Oscilloscope display of power meters for each phase

1653 Harmonics and Flicker (included)
- Voltage and current THD trends
- Voltage and current imbalance
- Harmonic spectrum, phase, magnitude to 63rd harmonic
- Tracking of individual harmonics
- Flicker to IEC 868

1651 Power Quality (included)
- Voltage waveshape faults as short as 130 µs duration, 1000 V peak
- Voltage sags/swells
- Simultaneous current corresponding to correlated with voltage events
- Power tolerance curves

1662 Multi-Session (included)
- Allows a recorder to store up to 2 measurement sessions
- Each session can consist of up to 6000 events, increasing the event storage to 12,000

1663 TCP/IP Option
- Enables Ethernet-equipped instruments to communicate via Internet

Software completes the system
There are two software packages available for the InSite Power Recorder. Both packages provide seamless communication, with graphical display of power system parameters and the ability to manage power survey data.

Power analyzer system software
- Offers optional Report Writer Software
- Offers Alarming and Polling Option
[Refer to accessories chart on next page]

Scenario software
- Includes facilities for comparing trends from multiple databases
- Calculates a Power Quality Index – a single figure of merit that characterizes the overall performance of a power system. The Power Quality Index allows you to trend system performance over time and determine whether a system is improving or degrading.

Specifications

Voltage inputs
Number of channels: 4
Range: 100 mV to 600 V rms, 1000 V peak
Accuracy: ± (1.0 % of reading + 0.5 V rms) at 50/60 Hz
Resolution: 90 mV
Input impedance: 2 MΩ, 30 pF
Frequency range: 50/60 Hz ± 5 Hz

Current inputs, Model 901
Input type: For use with user-supplied, industry-standard 5 A current transformers
Number of channels: 5
Range: 500 mA to 5 A rms nominal, 20 A rms maximum
Accuracy: ± (1.0 % of reading + 0.02 A V rms + external CT uncertainty) at 50/60 Hz
Insertion impedance: 0.003 Ω at 50/60 Hz
Input isolation: 600 V rms with respect to ground
Sampling
Voltage and current sampling: 128 samples per cycle phase-locked to 50 / 60 Hz
Voltage and current sampling rate: 6.4 / 7.7 kS/s depending upon line frequency
Voltage and current rms measurements: Processed for every full cycle
Power Measurements: W, VA, VAR, PF, dPF processed for every full cycle

Event recording
Events captured: Records V rms sags, swells and waveshape faults, with simultaneous current.
Event memory: 6,000 simultaneous voltage and current events
Sampling rate: 6.4 kS/s at 50 Hz, 7.7 kS/s at 60 Hz
Minimum waveshape fault: 130 µs
Transient voltage range: 200 - 1000 V peak
Transient voltage accuracy: ± (5 % +36 V)

Communication
RJ 45 Ethernet port for connection to 10–base T (UTP), TCP/IP support available as an option

Electrical
Operating voltages: 90 - 264 V AC, 47 - 63 Hz
Power consumption: 25 VA maximum
Battery: Built in auto-charging NiMH battery. UPS with 5 minutes back-up.

Mechanical
Size: 10.25 in x 8.7 in x 3.4 in
(26 cm x 22 cm x 8.7 cm)
Weight: 7.5 pounds (3.4 kg)
Operating temperature: 0 ° - 50 °C (32 ° - 122 °F), 90 % RH non-condensing
Storage temperature: -20 °C to 60 °C
Maximum altitude: 2000 meters

Standards
UL3111
IEC 868

Accessories
<table>
<thead>
<tr>
<th>RPM</th>
<th>Description</th>
</tr>
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<tbody>
<tr>
<td>5000/RPM</td>
<td>Power Analysis Software with User Manual</td>
</tr>
<tr>
<td>5100/RPM</td>
<td>Professional Report Writer Software (requires 5000/RPM)</td>
</tr>
<tr>
<td>5400/RPM</td>
<td>Scenario Analysis Software</td>
</tr>
<tr>
<td>5500/RPM</td>
<td>Master Polling And Annunciation Software (requires 5000/RPM)</td>
</tr>
<tr>
<td>5502/RPM</td>
<td>Sub-Polling And Annunciation Software (requires 5000/RPM and 5500/RPM Master Polling Software)</td>
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Warranty
1 year

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