



CX MONITOR



The **Cx Monitor®** is a power quality monitor adapted specifically for the needs of a commissioning agent. The monitor gathers all of the voltage and current data required for all of the commissioning tests as well as provide a means for also gathering T&H data for up to one hundred (100) locations! The **Cx Monitor®** is equipped to simultaneously monitor in real time, voltage on ten (10) separate channels and current on five (5) separate channels. This is ideal for documenting the testing of generators, UPS's and transfer switches.

Environmental & Safety

- Operating environment: Indoors
- Storage Temperature: -20°C to 50°C (-4F-122F)
- Operating Temperature: 0°C to 40°C (32F-104F)
- Max Changes per hour temp: 30°C
- Operating Humidity: 80% Max Non-Condensing

Synchronization & Sampling:

Low Frequency:

- Sampling Frequency: 256Samples/cycle
- A/D Resolution: 16 bit oversampled voltage 2X ; current 4X

High Frequency:

- 1.666Msample/sec per channel.
- A/D Resolution: 12 bit

General Specifications:

- Clock: Leap Year, 24-Hour, with time zone info
- Real-time Clock Accuracy: +/- 1Sec / day max.
- Internal Memory: Minimum 512Mbytes high speed NAND Flash
- Max number of events: Only limited by internal memory
- Power Requirements: 100V-240V ACrms +/-10% 47-63 Hz
10Watts 24Vdc 0.5Arms Center Barrel positive
- UPS standby time: Programmable Max time 10 Minute
- Dimensions: 11.5 x 10.25 x 4 Inches.
(Height x Width x Depth)
- Weight: 5.55lb

Voltage and Current Measurement:

Low Frequency

- Voltage Measurement Range: 0-600Vrms
- Voltage input impedance: 1.2Mohm

High Frequency

- Voltage Measurement Range: 0-2500V
- Measurement type: Digital Sampled AC coupled digital threshold trigger 500 sample buffer per channel
- Voltage input impedance: 1.2Mohm

Current Measurement Range (Probe dependant)

- Current input type: AC/DC +/- 12Vdc Input impedance 120K, 1M to gnd.



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Voltage and Current Accuracy:

Low Frequency

- A/D Measurement type: True RMS calculated continually every half cycle
- A/D Measurement Uncertainty: AC +/- 0.5% reading +/- 0.5% full scale above 50Vrms
DC +/- 0.5% reading +/- 0.5% full scale above 50V dc Offset Error: AC/DC: 0.5Vrms

High Frequency

- A/D Measurement type: Sampled Threshold cross 500 sample buffer per channel
- A/D Measurement Uncertainty: AC +/- 5% reading Offset Error: AC: 5V

Current:

- A/D Measurement type: True RMS calculated continually every cycle
- A/D Measurement Uncertainty System:
- AC +/- 1% reading +/- 1% full scale above 50Arms
- DC +/- 1% reading +/- 1% full scale above 50Adc
Offset Error: AC/DC: 1Arms

Measurement Uncertainty Probes:

AEMC 200Arms medium

- Measuring range: 0.5A- 240Arms AC
- Max Working Voltage: 600Vrms
- Basic probe accuracy: Of reading
 - 0.5A-10A: 3.0%
 - 10A-40A: 2.5%
 - 40A-100A: 2.0%
 - 100A-240A: 1.0%
- Linearity: 1% + accuracy
- Conductor sensitivity: none
- Frequency Response 40Hz – 10 kHz
- Phase Shift:
 - 0.5A-10A: Not Specified
 - 10A-40A: < 5.0 degrees
 - 40A-100A: < 3.0 degrees
 - 100A-240A: < 2.5 degrees
- Total System Accuracy: +/- 4% rms with offset errors of +/- 0.5Apk
- System Gain: 0.02A/Count (16bit a2d)
- Output voltage: 10mV/Amp
- Total Range: +/- 600Apk





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Measurement Uncertainty Probes:

3000A ProSys:

- Measuring range: 5A- 3200Arms AC
- Max Working Voltage: 600Vrms
- Basic probe accuracy: $\pm 1\%$ of reading $\pm 1A$
- Linearity: $\pm 0.2\%$ of reading
- Conductor position sensitivity: $\pm 2\%$ of reading
- Frequency Response: 10Hz to 10 kHz (-1dB)
- Phase Shift: < 1 degrees
- Total System Accuracy: $\pm 2\%$ rms with offset errors of $\pm 2.5A_{pk}$
- System Gain: 0.2A/Count (16bit a2d)
- Output voltage: 1mV/Amp
- Total Range: $\pm 6000A_{pk}$ probe limited to 4500 Apk
- DC offset on startup can be significant for approximately 1 sec.

6000A ProSys:

- Measuring range: 10A- 6400Arms AC
- Max Working Voltage: 600Vrms
- Basic probe accuracy: $\pm 1\%$ of reading $\pm 10A$
- Linearity: $\pm 0.2\%$ of reading
- Conductor position sensitivity: $\pm 2\%$ of reading
- Frequency Response: 10Hz to 10 kHz (-1dB)
- Phase Shift: < 1 degrees
- Total System Accuracy: $\pm 2\%$ rms with offset errors of $\pm 5A_{pk}$
- System Gain: 0.4A/Count (16bit a2d)
- Output voltage: 0.5mV/Amp
- Total Range: $\pm 12000A_{pk}$ probe limited to 9000 Apk
- DC offset on startup can be significant for approximately 1 sec.