Power Xpert® 4000/6000/8000 Power Quality Meters

Technical Data

Eaton Power Xpert Architecture

Eaton Power Xpert Architecture provides the framework to unify the entire power system. It connects power systems with communication and management systems to provide a holistic approach to the entire power system. This strategic system-level focus is integral to PowerChain Management™ Solutions. It provides increased reliability, cost efficiencies, enhanced safety and risk mitigation and allows for the more effective use of capital. Eaton Power Xpert Architecture is comprised of both software and hardware components including meters, gateways, time servers and connectivity devices.

Application Description

Manage energy utilization

- Reduce peak demand charges and power factor penalties
- Identify excessive energy consumption

Monitor circuit loading

- Avoid overloads and nuisance overload trips
- Maximize equipment utilization
- Manage emergency overloads

Identify power quality problems

- Protect motors from damage
- Preserve the integrity of processes and batches
- Prevent blown capacitor bank fuses
- Protect transformers and conductors from overheating

Detect and record high-speed transients

- Avoid equipment damage
- Identify equipment malfunction

Metered/monitored parameters

- Flicker
- Availability
- Phasors
- Sequence components
- Crest factor
- K-factor
- PQ Index

Physical Characteristics

Two-piece design—power quality meter base module and display module

- 320x240 pixel backlit LCD remote graphic display module
- Display mounted with meter base module or up to 2000 feet away
- Meter may be operated without a display
- Graphic display module can support a sub-network of up to 16 remote meter base modules

Communication Interfaces

Standard

- RS-485 remote display port
- RS-485 Modbus RTU slave port
- RJ-45 10/100 baseT local configuration port (Local Web server connection)

Optional

- Selectable 100F fiber-optic or 10/100 BaseT Ethernet network port
- RS-485 Modbus RTU selectable master/slave port

For graphic display module

(To view data from up to 16 Power Xpert 4000/6000/8000 meters on the same network)

- RS-485 meter display network port
- RJ-45 10/100 BaseT for easy access to local meter configuration and network

Communication Protocols Supported

- Modbus RTU
- Modbus TCP
- Ethernet TCP/IP
- HTML
- FTP
- SNMP
- NTP
- DCF-77

Time Synchronization

- Up to 1 millisecond time stamping accuracy available via GPS and IRIG-B time references (option) for sequence of events determination in a time synchronized environment
- Time sources traceable to National Institute of Standards and Technology (NIST) atomic time
- DCF-77 protocol support for time synchronization input
- Network Time protocol (NTP) support (standard)

Listings/Certifications

UL, CUL, CE mark EN61010-1, ANSI, IEC

General Description

Eaton Power Xpert 4000/6000/8000 power quality instruments monitor, record and analyze critical aspects of an electrical distribution system—so you can optimize energy utilization, process performance and cost. This premier power quality instrument serves several essential functions:

- Highly accurate digital meter, to measure and log current, voltage, power factor, etc.
- Circuit monitoring device, watching for harmonics, voltage transients and other potentially harmful power events
- Alarm system, sending notifications and emails to selected people and power management software when conditions exceed established tolerance ranges
- Power quality analyzer, capturing waveforms and other information to support in-depth statistical analysis

Power Xpert 4000/6000/8000 meters introduce a new level of intuitive user interface design. System information is presented in a way that is simple to understand and navigate:

- A graphic display module presents information from up to 16 Power Xpert 4000/6000/8000 instruments, mounted locally or up to 2000 feet away; a simple "twist-n-click" navigation dial makes it easy to select menus, views and links—and drill down into increasing levels of detail or back up

to summary levels or previous views
- An embedded Web server displays complex power quality data on standard Internet browsers, and permits device configuration over the Web

Both the graphic display module and embedded Web server present real-time, historical and event information in a browser-style graphical format. The visual presentation makes it easy to interpret important circuit information, such as current loading, voltage and power levels, power factor, energy usage, I/O status and power quality measurements, as well as harmonic plots, disturbance and transient waveforms and an ITIC disturbance summary screen.

The Web server also provides the energy and demand readings required to help manage the cost of energy, as well as power quality information, such as harmonic distortion, flicker, crest factor, k-factor and more.

Feature Highlights

Sag and swell recording— Record 60 cycles of wav form at 256 samples per cycle, including 30 cycles of pre- and post-event data; waveforms can be viewed over the Web, retrieved from non-volatile meter memory by ftp, or sent as a Comtrade email attachment

Very fast transient sampling— The PowerExpert 8000 meter samples high-speed transients at 6 MHz— 100,000 samples per cycle—to catch damaging transients that peak and decay within microseconds

Fast sampling of harmonics and other events— All three Power Xpert 4000/6000/8000 models sample voltage at 1024 samples per cycle, using a Delta Sigma converter that accurately measures all frequencies

Anti-alias filtering— Power Xpert 4000/6000/8000 meters cleanse data to remove alias measurement error, then record a clean, statistically representative 256 samples per cycle

Statistically derived trending — Record not only the value of power parameters, but also the average, minimum and maximum of that parameter over the specified interval

Power Quality index— Green-yellow-red indicators provide an at-a-glance view of power quality performance versus the norm for that circuit—now and historically

Self-learning mode— The meter independently monitors activity on a circuit, characterizes "normal" for that circuit, and determines proper limits for routine health-checks and alarms

Events plotted on an ITIC curve— Right out of the box, these meters populate and display ITIC curves on both the local display and the Web interface, with no special software required

Time Synchronization up to 1ms accuracy— Up to 1 millisecond time stamping accuracy is available via GPS and IRIG-B time references (option) for easy sequence of events determination in a time synchronized environment. Network Time Protocol support is built into the meters as standard.

Easy-to-use interface— Next-generation power quality monitoring is now as easy as point-and-click (over the Web) or twist-and-select (on a local, graphical display module)

Large local graphic display module— A crisp, 320x240-pixel, backlit display is mounted near the meter or networked to support a sub-network of up to 16 meters; intuitive graphics include an at-a-glance power quality (PQ) index, ITIC curve and meter summary

Embedded Web server application— A password-protected Web interface (multiple user authentication levels) makes it easy to assess power conditions in summary and detail views

Simple connectivity for local communications— A built-in Ethernet port provides local access; simply plug in a local laptop to perform a full range of analysis and reporting

Monitor power from anywhere —An optional interface card supports remote communications with the onboard Web server application over your LAN/WAN via the Internet

Industry-standard interfaces— Choose from standard physical interfaces (RS-485, RS-232, RJ-45 Ethernet, fiber-optic port) and protocols (Modbus/TCP, Modbus RTU, HTML, SNMP, SMTP, FTP, NTP, COMTRADE)

Modular architecture— Mix-and-match displays and base modules provide configuration flexibility, while modularity within the meter itself (replaceable power supply card, communications card, input/output card) enables dynamic servicing and upgrading as necessary

Flash upgrades in the field — Upgrade the meter without sending it back to the factory or loading custom software; simply load new features from the provided firmware file using password-protected access to the embedded Web server

Easy configuration— While most power meters of this caliber require custom software for configuration, Power Xpert 4000/6000/8000 meters incorporate comprehensive configuration capabilities built right into the embedded Web server

Remote input monitoring — The meters accept digital inputs from other meters (such as gas, water, pressed air, sewer or steam), record this information at user-specified intervals, and display it with the same options as available for power monitoring

Networked display— The graphic display module can support power quality information from up to 16 daisy-chained meter base modules

User security— Define which users can access the password-protected Web interface and what level of authority they have to use specific functions, without the worry that unauthorized users will interfere with power quality systems

To find out more about how Eaton Power Xpert 4000/6000/8000 next-generation meters can improve power performance for your critical systems, visit our Web site at www.eatonelectrical.com or contact us at 1-800-525-2000.

Technical Highlights

Metered/Monitored Parameters
- Volts: Absolute—line-to-line, line-to-neutral
- Average—line-to-line, line-to-neutral, line-to-ground
- Phase neutral and ground currents
- Power: real, reactive and apparent
- Frequency
- Power factor: apparent and displacement
- Energy
- Demand
- Percent total harmonic distortion (THD)
- Minimum and maximum values
- Harmonics
- EN50160 measurements

Sampling capabilities
- A/D technology, sampling at 1024 samples per cycle
- Over-sampling and quantizing filtering to eliminate false signal noise
- Waveform recorded at 256 samples per cycle
- ITIC representation of power events
- dV/dt triggers for sub-cycle oscillatory transients (Power Xpert 6000/8000)
- 6 MHz/1MHz capture of impulsive transients*
- Waveform recorded at 100,000 samples per cycle*
- Three-phase voltage and neutral-to-ground fast transient capture*
- Absolute Threshold and dV/dT triggering*

*Power Xpert 8000

Harmonic distortion analysis
- THD, K-Factor, Crest Factor, Flicker, 9s of availability, ITIC, Power Quality Index
- Phase angle and magnitude through the 128th harmonic

Time-of-use metering
- Four rate periods for Time of Use (TOU) revenue metering
- Total rate, independent of time of use
- Up to 64 rate schedules (weekdays and weekends)

Historical Trend Logging
- On-board data logging of any direct or calculated parameter
- Intervals from one minute for nine days or 60 minutes for 540 days
- Supports data storage redundancy

Event and trend logging
- ITIC curve display of sag or swell voltage events
- Out-of-limit, ANSI alarms, ITIC events
- Events trigger parameter capture, waveform capture, and/or email
- Events can trigger a change in state of internal or external I/Os

Inputs and outputs
- Optional, external I/O module for auxiliary functions, with eight digital inputs, three relay outputs, two solid-state outputs
- Digital inputs can interface with control sensors and transducers
- Relay outputs can actuate alarms and change the state of control relay contacts

Graphical display module
- 320x240 LCD graphic backlight display
- Display mounted directly to the base of the meter or up to 4000 feet away

- Meter may be operated without a display
- A single display supports up to 16 meters

Communications

Multiple, concurrent communication interfaces:

- RS-232
- RS-485
- Ethernet (optional)

Communication protocols supported:

- Modbus RTU, Modbus TCP
- HTML Web pages, FTP
- Ethernet TCP/IP
- NTP
- SNMP
- DCF-77

Daisy chaining of multiple meters to one graphic display module:

- Up to 16 Power Xpert 4000/6000/8000 meters
- RS-485 Modbus RTU connections among meters
- Power Xpert 4000/6000/8000 meter as Ethernet gateway/ Web server
- Connect to display module, Foreseer software or other management systems

Technical Specifications

Compliance: Meter & Display

Safety

EN 61010-1

CNL evaluation to CAN/C22.2 No 1010.1.92

UL 61010-1, 2nd Edition

- Display face
- UL Validated to NEMA type 12, IP42
- Meter & Display back
- UL Validated to NEMA type 1, IP30

Accuracy

- IEC/EN 60687, Classes 0.2 & 0.5 (0.2% min)
- ANSI C12.20 (Electricity Meters 0.2%)

CE mark

Electromagnetic Compatibility

Emissions

- FCC Part 15, Subpart B, Class A Radiated & Conducted
- EN55011 Class A Radiated & Conducted
- IEC 61000-3-2, EMC - Harmonic Current
- IEC 61000-3-3, EMC - Flicker - Low Voltage

Immunity - EN 61326, Industrial EMC Immunity

- EN 61000-4-2, ESD Level 2
- EN 61000-4-3, Rad. RF Level 3
- EN 61000-4-4, EFT Level 3
- EN 61000-4-5, Surge Level 2/3 (signal/mains)
- EN 61000-4-6, Cond. RF Level 2
- EN 61000-4-11, Voltage Var.

Environmental

IEC 60529

- Display face IP42
- Display back IP30
- Meter IP30

IEC 60255-21-1, Vibration, Class 1

IEC 60255-21-2, Shock/Bump, Class 1

IEC 60255-21-3 Seismic, Class 1

IEC 68-2-6, Vibration

Environmental Ratings - Meter and Display

For Indoor Use Only

Operating Temperature

- -20° to 60°C (-4° to 140°F) - no rating restriction

Storage Temperature

- -40° to 85°C (-40° to 185°F)

Humidity

5% - 95% (non-condensing) for all temperatures

Maximum Operating Altitude

- 2000 meters (6,561 feet)

Pollution Degree II for Meter and Display Back

Pollution Degree III for Display Front

- Panel Housing must be => NEMA 12 or IP52
- Panel must be flat to accept Display gasket
- Display Ethernet cover must be closed

Dimensions/Clearances/ Weights

Meter

Height:

- 8.2 inches
- Top/Bottom Clearance -3 inches minimum
- Clearance required for proper ventilation

Width:

- 8.2 inches
- Side clearance - 2 inches minimum
- Clearance required for proper access to termination

Depth:

- with terminals and panel mounting feet - 6.8 inches
- Add 1.2 inch depth clearance for terminal plug field cable termination
- Add 3.2 inch depth clearance for RS232 or Fiber Optic

Shipping Weight 7.1 lbs.

Graphical Display

Height:

- Frame 9.02 inches
- Body back 7.22 inches

Leave 2 inch top/bottom clearance for proper ventilation

Width:

- Frame 7.77 inches
- Body back 7.22 inches

Depth:

- 2.54 inches total
- 1.4 inches from back of mounting panel back Assumption panel = .125 in. thickness
- 1.04 inches from the front of mounting panel to tip of knob.

Shipping Weight: 2.1 lbs.

Electrical Specifications

Display Power Supply Input (DG2)

24 Vdc +/- 10%

8 W maximum draw

Common TVS bonded to ground ~ 300V

Wiring to 4 position removable terminal plug

- 12-18 AWG, wire ferrules recommended

Meter Power Supply Input

PXPS-1 Standard (PS1):

- 100 - 240 Vac +/- 20%, 47 - 63 Hz
- 110 - 250 Vdc +/- 20%
- 50W maximum draw
- Minimum Ride through 0.5 Sec
- Neutral (-) TVS bonded to ground ~ 575V
- Wiring to 3 position removable terminal plug
  - 12-18 AWG, wire ferrules recommended

PXPS-4 Low Voltage (PS1):

- 24 - 48 Vdc +/- 20%
- 60W maximum draw
- Minimum Ride through 0.2 sec
- Negative pole TVS bonded to ground ~ 575V
- Wiring to 3 position removable terminal plug
  - 12-18 AWG, wire ferrules recommended

Meter PXCM 24VDC outputs (CM4, CM6)

24VDC +/-10%

10W maximum load

Output switched off on PS1 power down

Common to paired RS485 port

- CM3/CM4
- CM5/CM6

Common TVS bonded to ground ~ 300V

Wiring to 3 position removable terminal plug

- 12-18 AWG, wire ferrules recommended

Meter PXIO Discrete Inputs (IO1)

Qty 8 common circuits IO1.1-1.8

24V internal source IO1.9

- To drive external dry contact

Input impedance ~ 2.2K ohm

Input current draw ~ 10 mA

Minimum pulse width 10 millisecond

Maximum pulse rate 20 Hz

Common TVS clamped to ground ~ 300V

Wiring to 9 position removable terminal plug

- 12-18 AWG, wire ferrules recommended

Meter PXIO Solid-State Outputs (IO2)

Qty 2 – Form A NO Bi-directional FET

Isolation Circuit to ground 2KV /1 min.

Isolation SS1 to SS2 2KV / 1 min.

Maximum external source voltage 30Vdc

Line to Line TVS clamp at 32Vdc

Maximum load current 100 mA.

Minimum pulse width 20milliseconds

- Fixed 25milliseconds for Pulse Initiator function

Maximum pulse rate 25Hz

Wiring to 4 position removable terminal plug

- 12-18 AWG, wire ferrules recommended

Meter PXIO Relay Outputs (IO3)

Qty 3 - Form C Relays (both NO=A and NC=B contacts)

Rated Current Voltage 5 A/30 Vdc, 100 - 240 Vac

Isolation circuit to ground 2,500 V / 1 minute

Isolation Relay to Relay circuit 2,500 V / 1 minute

Contacts MOV protected at ~300V

Lifetime 5 A load 1,000,000 cycles

Response Turn-On/Off Time ~ 20 - 30 msec

Wiring to 9 position removable terminal plug

- 12-18 AWG, wire ferrules recommended

Metering inputs

Current Inputs CT1-5 (Each channel)

Rating 5 A secondary nominal,

20 A continuous max

Metering Range 0.25 to 20A

Burden < 10 mohm

Overload Withstand

- 500 A ac / 1 sec, non-repeating

Accuracy

- 0.05% of reading + .01% of full scale (50 mA to 20A)

Wiring to removable terminal plug

- Screw down cover
- Range 10 AWG - 18 AWG

Safety Insulation Rating

- 600 V all CT circuits to ground
- Installation Category CAT III

Dielectric Withstand

- All inputs to ground 3500 Vac / 1 min

ADC Conversion

- 15.46 ksps through delta-sigma A/D
- True rms processing at 256 sample/cycle
- Delta sigma A/D oversampling rate: 1024 samples/cycle

Standard Metering Voltage Inputs VTV1-VR

Maximum Rating

- 347 Vac rms L:G
- 600 Vac rms L:L
- Installation Category CAT -III

Metering Range (Temporary transitions)

- 30-700 Vac rms L:G

Abuse Overload Rating

- 1000 Vrms Sustained

Input Impedance 2 megohm

Accuracy

- 0.1% of reading + .02% of full scale 63-347 Vac rms L:G

Wiring to removable terminal plug

- range 10 AWG - 18 AWG

ADC Conversion

- 15.46 ksps through delta-sigma A/D
- True rms processing at 256 sample/cycle
- Delta sigma A/D oversampling rate: 1024 samples/cycle

Auxiliary Voltage Inputs VXV6-V8

Maximum Rating

- 347 Vac rms L:G
- 600 Vac rms L:L
- Installation Category CAT -III

Metering Range (Temporary transitions)

- 30-700 Vac rms L:G

Abuse Overload Rating

- 1000 Vrms Sustained

Input Impedance 2 megohm

Accuracy

- 0.1% of reading + .02% of full scale 63-347 Vac rms L:G

Wiring to removable terminal plug

- range 10 AWG - 18 AWG

ADC Conversion

- 15.46 ksps through delta-sigma A/D
- True rms processing at 256 sample/cycle
- All samples used in all rms calculations
- Delta sigma A/D oversampling rate: 1024 samples/cycle

High Speed Transient Voltage Inputs VTV1-VR

(Parallel circuit to Standard Metering using the same terminal block.)

Maximum Rating

- 347 Vac rms L:G
- 600 Vac rms L:L
- Installation Category CAT -III

Metering Range

(Temporary transitions- Surge/ transients)

- +/- 40-8000 Vpk L:G

Abuse Overload Rating

- 1000 Vrms Sustained

Input Impedance - 2 mega ohm

Accuracy

- +/-40V

Wiring to removable terminal plug

- range 10 AWG - 18 AWG

ADC Conversion

- 1 or 6 MHz

VT Standard/High Speed Inputs

PT Potential Transformers Requirements

Single Phase

No PT required:

- 120 Vac L:N or 240 Vac L:L
- 277 Vac L:N or 554 Vac L:L

PT required:

- Over 277 L:N or 554 Vac L:L

Wye

No PT required:

- 120 Vac L:N or 208 Vac L:L
- 277 Vac L:N or 480 Vac L:L
- 347 Vac L:N or 600 Vac L:L

PT required:

- Over 347 Vac L:N or 600 Vac L:L

Delta

PT recommended:

- Up to 480 Vac L:L

PT required:

- Over 480 Vac L:L

Optional VX Auxiliary Input

PT Potential Transformers Requirements

Delta

PT recommended:

- Up to 480 Vac L:L

PT required:

- Over 480 Vac L:L

Ordering information

Power Xpert® 4000/6000/8000 Meter Catalog Numbering System

PX 8 0 5 1 A 5 B B

Model Series

4=4000 (Standard Power Quality)

6=6000 (Enhanced Power Quality)

8=8000 (Premium PQ w/Transient Capture)

Voltage Input Configuration

0=Standard (V_1, V_2, V_3, V_4)

2=Standard plus auxiliary (V_6, V_7, V_8)

Power Supply Configuration

1=Standard 100-240 VAC or 110-250 VDC Power Supply

4=24-48 VDC Option

Card Slot 3 Configuration

A=No Card Option

B=I/O Option Card (8 Digital Inputs, 2 Solid State Outputs, 3 Relay Outputs)

Card Slot 2 Configuration

A=No Card Option

B=Communications Expansion Card w/ 10/100 Base-T, 100F, RS-485, RS-232 Ports

Card Slot 1 Configuration

5=Standard Communications Main Board w/512 MB Compact Flash Card

6=Standard Communications Main Board w/1 GB Compact Flash

Example 1: **PX8251A5BB** (PX 8000 Meter, w/ VAUX, Std pwr, 512MB CF, Com. Exp. & I/O Cards)
Example 2: **PX6251A6BA** (PX 6000 Meter, w/ VAUX, Std pwr, 1GB CF, Com. Exp.Card)

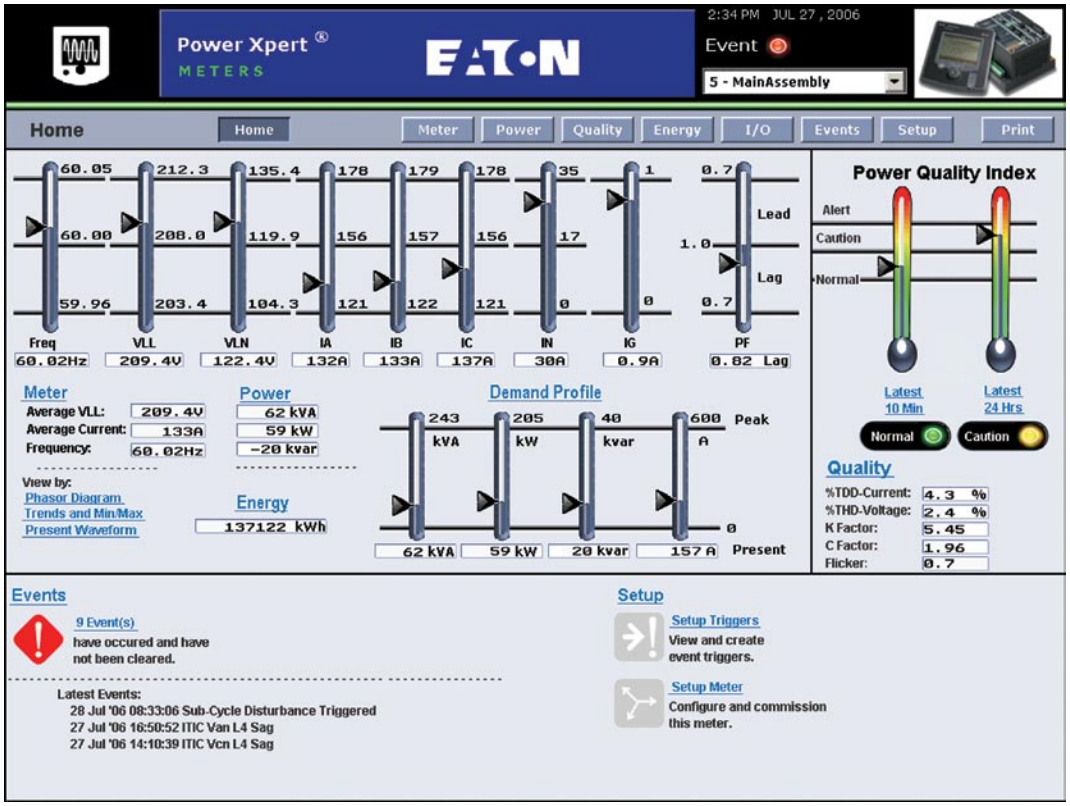
Power Xpert® 4000/6000/8000 Meter Accessories

DESCRIPTION	CATALOG NUMBER
Digital I/O Card: 8 Digital Input, 2 Solid-State Output, 3 Relay Output	PXIO-B
Communications Expansion Card: Ethernet 100FX, 10/100T, RS-485, RS-232	PXCE-B
Graphic Display Module	PXD-MMG
Panel Mounting Bracket Assembly for Back-to-Back Meter to Graphic Display Mounting	PX-PMBA
Panel Mounting Bracket Assembly for Retrofitting a Graphic Display to an IQ Analyzer Cutout	PX-PMBB
Panel Mounting Bracket Assembly Required for Reduced Graphic Display Rear Clearance	PX-PMBC
1GB Compact Flash Card	PX-1GBCF

Access the meter through the Internet/Ethernet via embedded Web Server

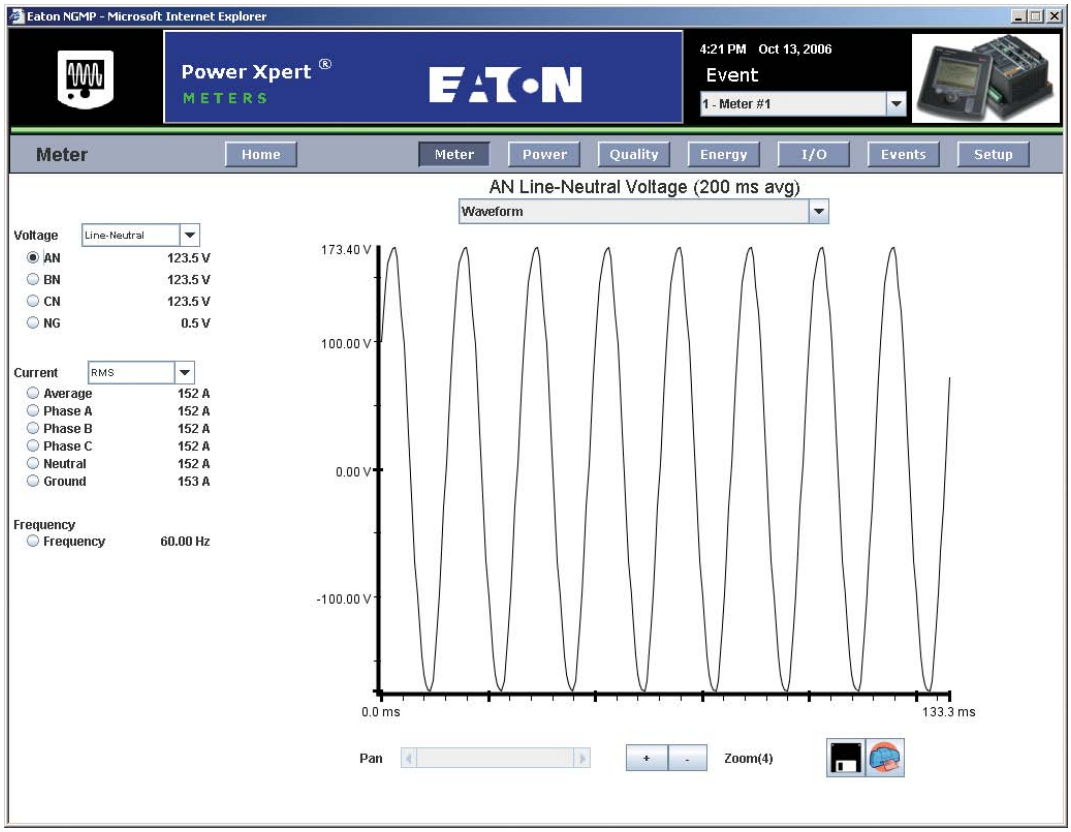
Power Xpert 4000/6000/8000 Meter offers Eaton customers a new level of accessibility to the critical information required to manage the electrical distribution system. The meter embedded Web server includes real time circuit information in both numeric and graphical visual formats to help monitor circuit parameters such as current loading, voltage and power levels, power factor.

FIGURE A. POWER XPERT 4000/6000/8000 HOMEPAGE



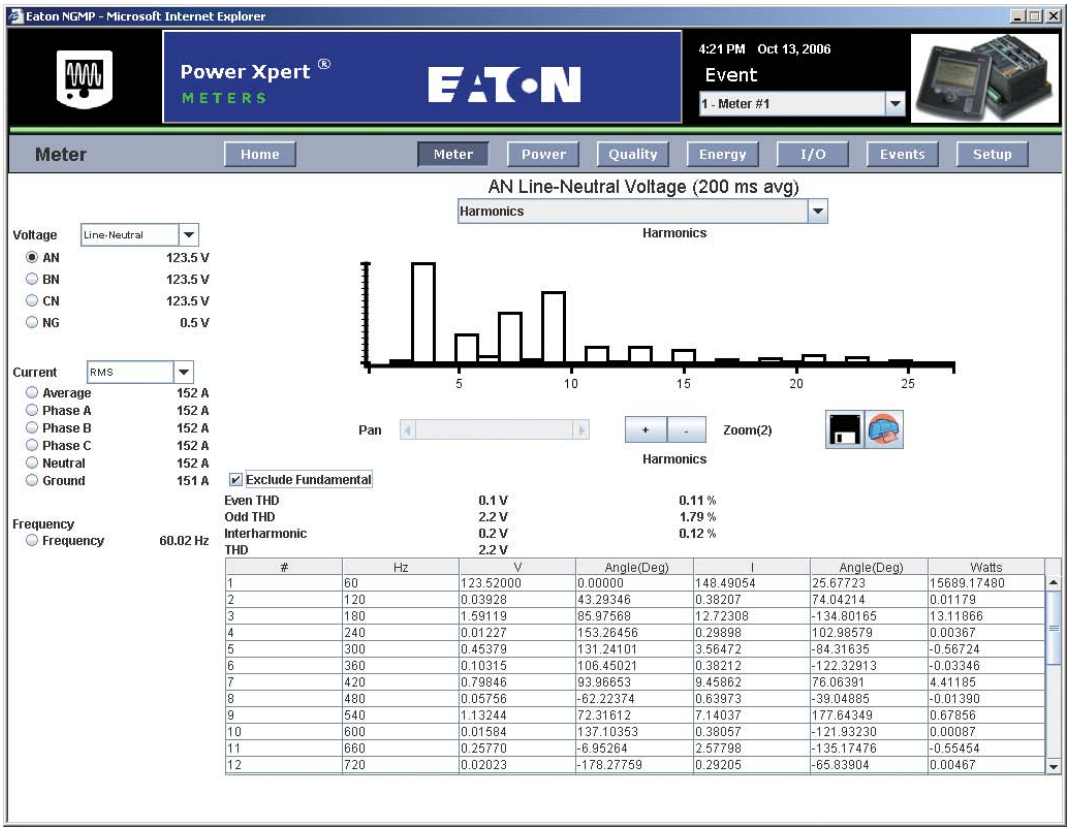
The Web server also provides the energy and demand readings required to help manage the cost of energy. Readings include KWh, KVARh, delivered and received and KVAh with time of use and separate status input controlled energy accumulation to account for energy during special times such as rate alert periods or stand-by generator times of operation. The Power Xpert 4000/6000/8000 Web server also includes critical information regarding Power Quality such as harmonic distortion, flicker, crest factor, k-factor and more.

FIGURE B. STEADY STATE WAVEFORM



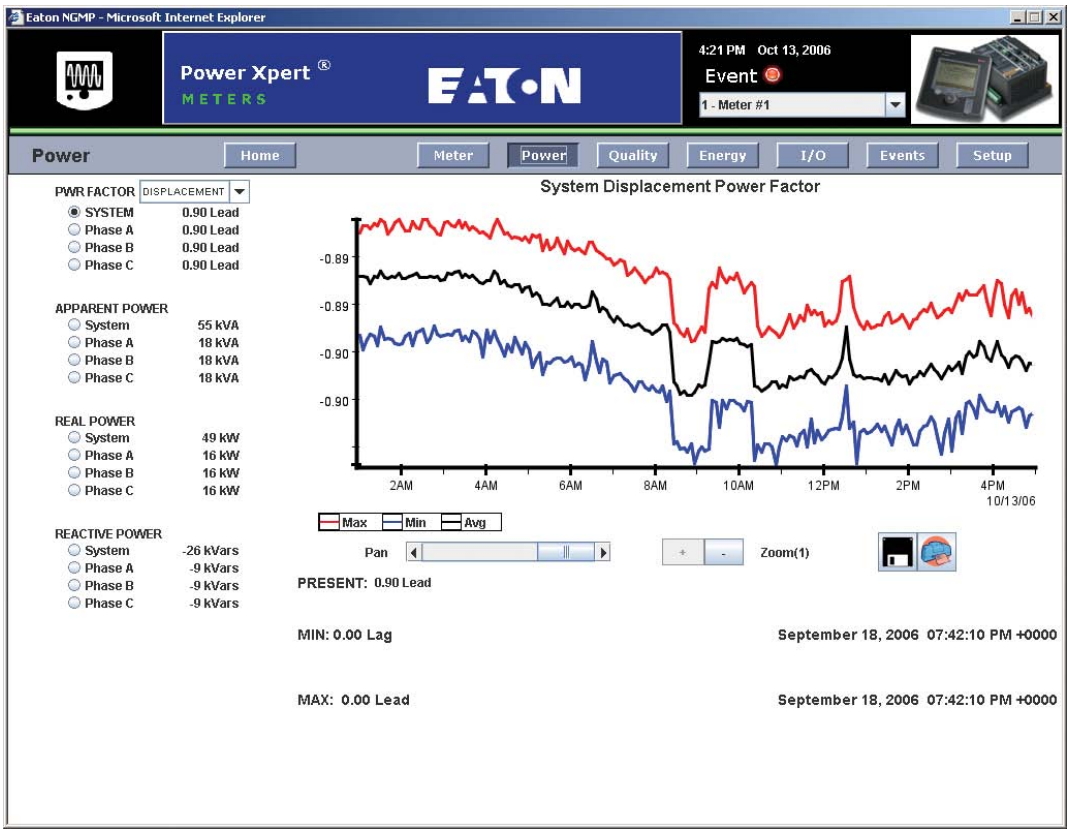
The Web server allows the user to view waveforms of the voltage and current to spot power quality problems such as notching.

FIGURE C. HARMONIC SPECTRAL PLOT



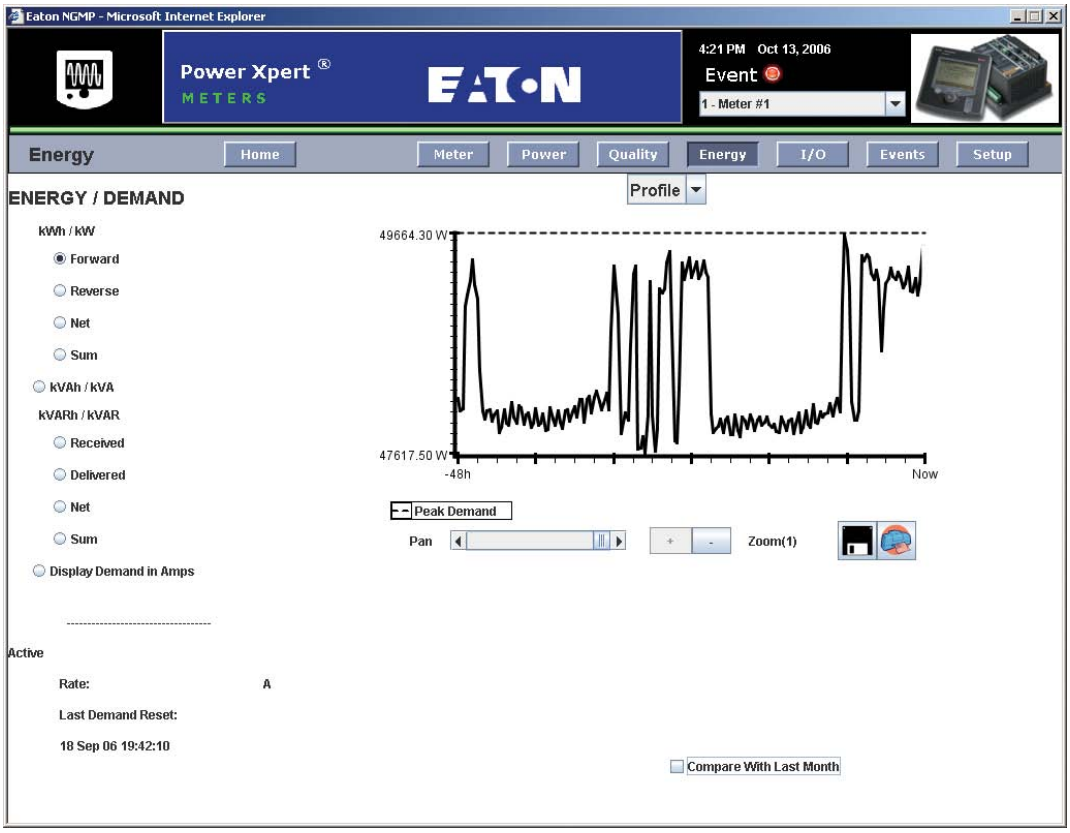
The harmonic spectral plot displays both harmonics and interharmonics up to the 85th order. A detailed table also includes individual magnitudes and angles of current and voltage harmonics as well as a harmonic power calculation at each frequency. Even, Odd, Interharmonic, and total THD are displayed for diagnostic purposes.

FIGURE D. HISTORICAL TREND PLOT



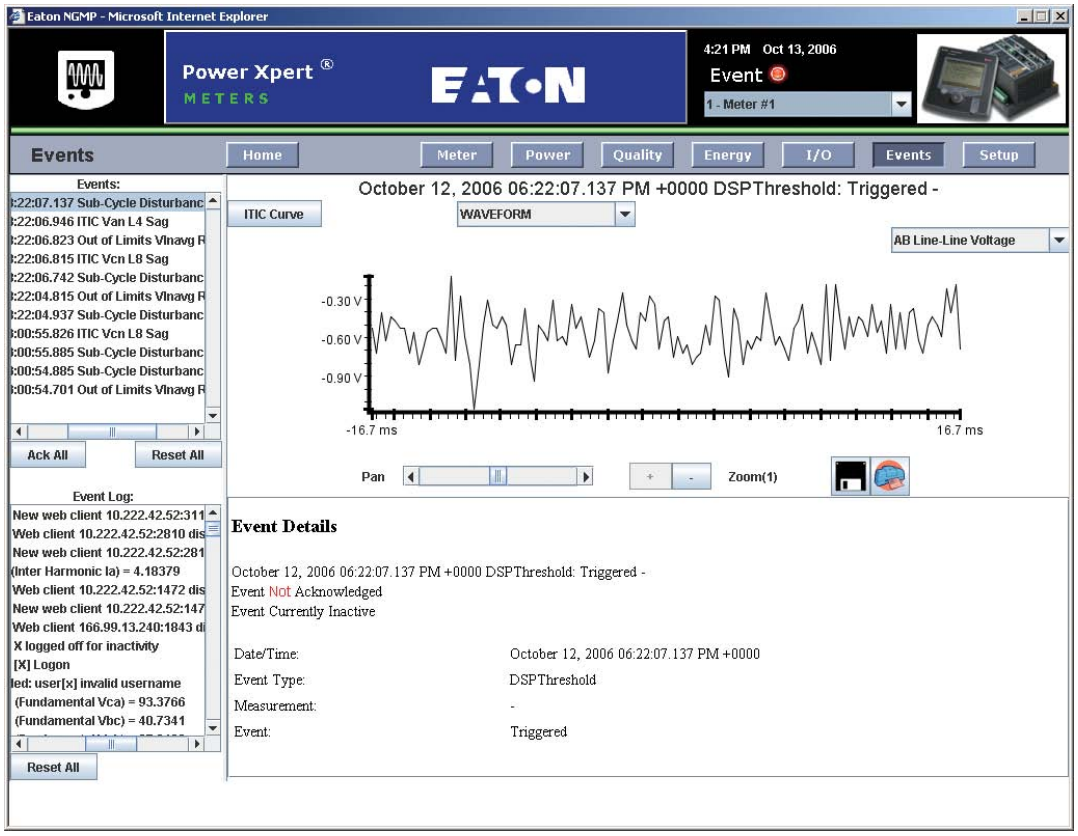
The Power Xpert 4000/6000/8000 embedded Web server supports graphical trend charts of key circuit measurements such as current, voltage, power and energy. The trend chart supports a zoom feature that allows the user to view data over a short period of 18 hours or a longer period of 48 months. The trend chart has a horizontal slider bar control to manage scrolling forward and backward through the data. Trend charts of basic readings include minimum, maximum and average readings. Trend charts of energy data also display demand values.

FIGURE E. ENERGY LOAD PROFILE



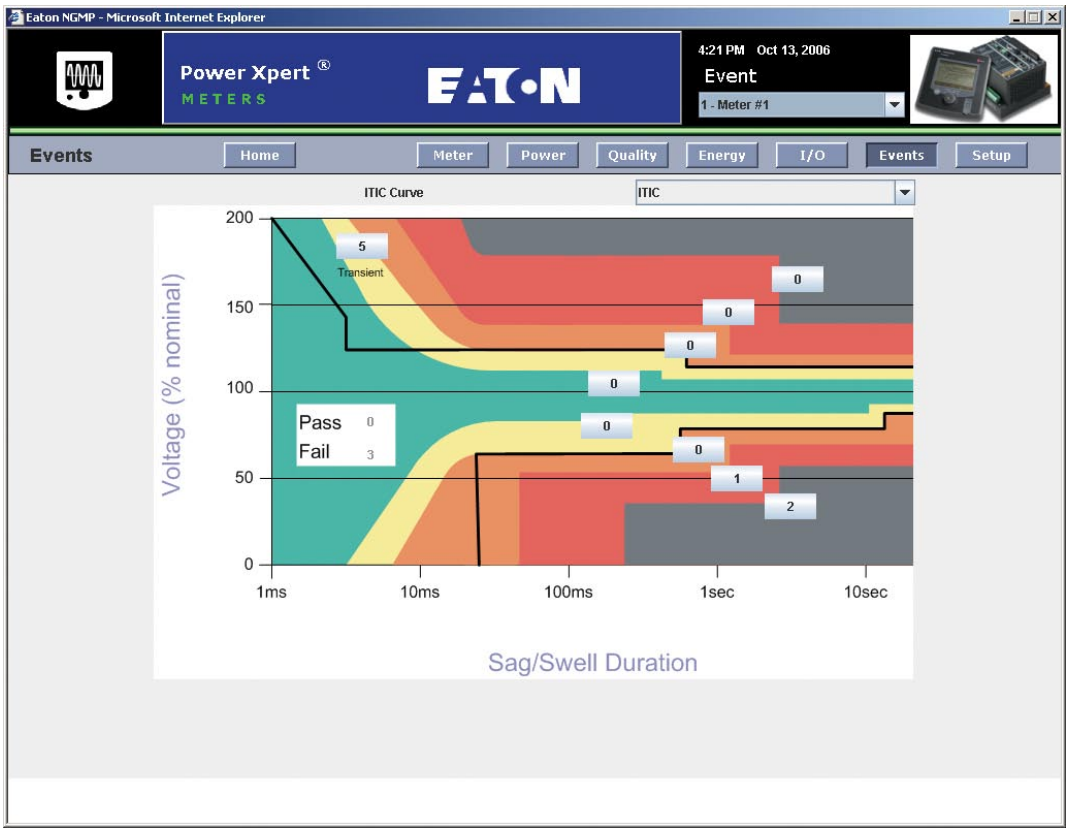
Energy Managers can view load profile data compared against the peak demand. The plot allows comparison of present and past months' usage.

FIGURE B. STEADY STATE WAVEFORM



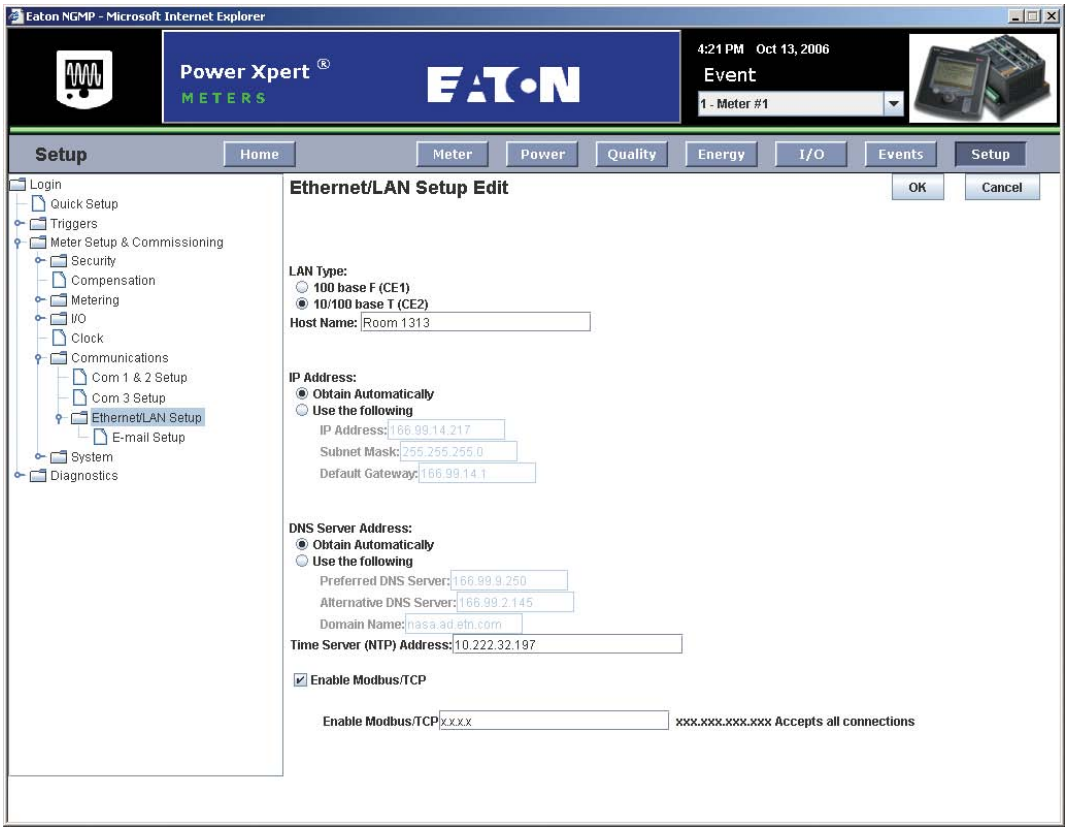
60 cycles of waveform are recorded at 256 samples per cycle including 30 cycles of pre and post event data. The Power Xpert 4000/6000/8000 embedded Web server supports viewing of triggered waveforms one channel at a time including the ability to zoom and to scroll horizontally using a slider bar. Waveforms are stored in the meters non-volatile flash memory using an industry standard Comtrade format. Waveforms can be automatically sent out by email following an event, or can be retrieved from an FTP directory structure in the meters memory.

FIGURE G. ITIC ANALYSIS PLOT



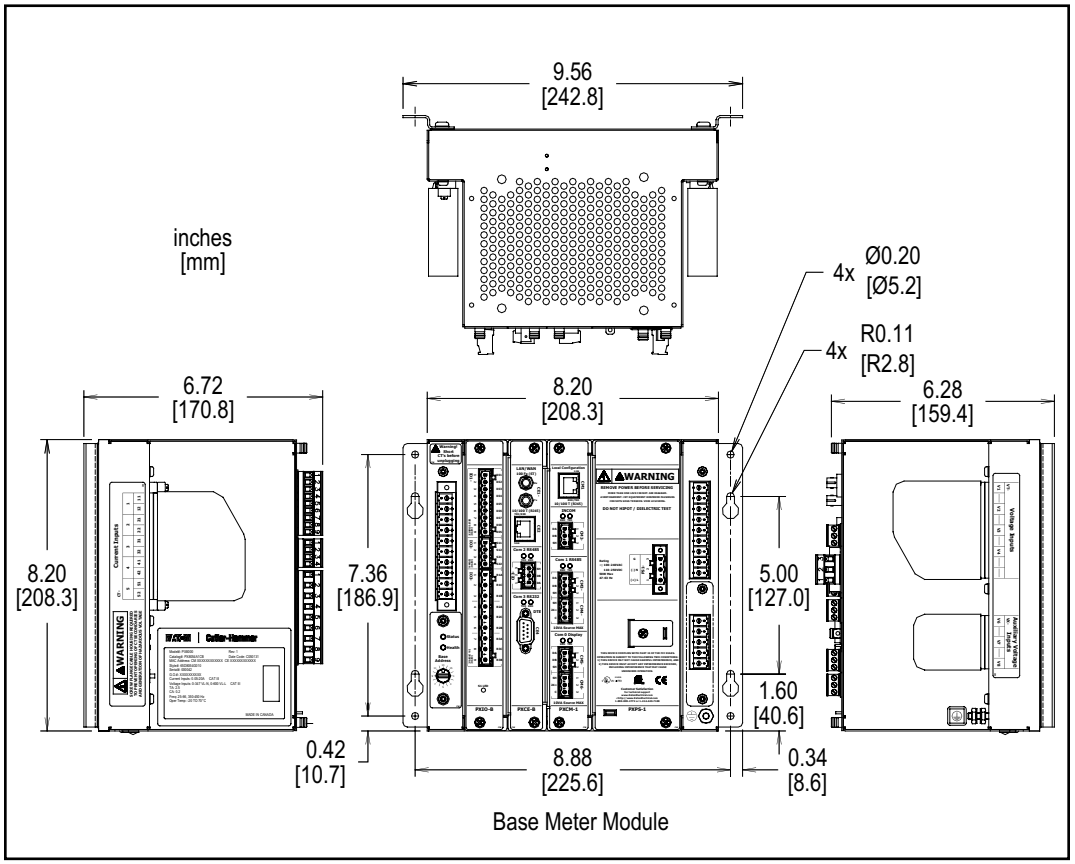
The ITIC Web page includes counters to track the occurrence of disturbances and a pass/fail summary. In addition, selecting any disturbance counter links to a detailed event view of the disturbances in that ITIC category. Disturbance waveforms can be viewed from the browser.

FIGURE H. WEB SERVER DEVICE CONFIGURATION



Special software is not required to configure a Power Xpert 4000/6000/8000 meter. The embedded Web Server includes comprehensive device set-up capability.

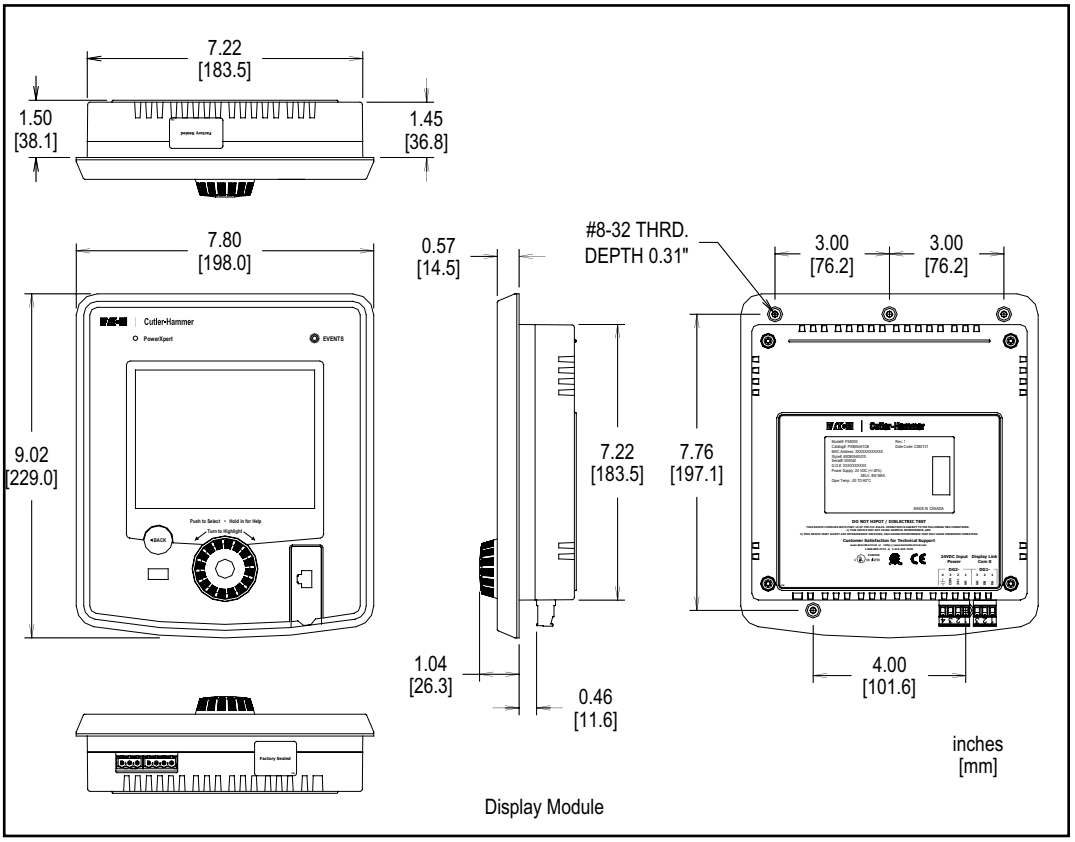
POWER XPERT 4000/6000/8000 METER MODULE PHYSICAL CHARACTERISTICS



Base Meter Module

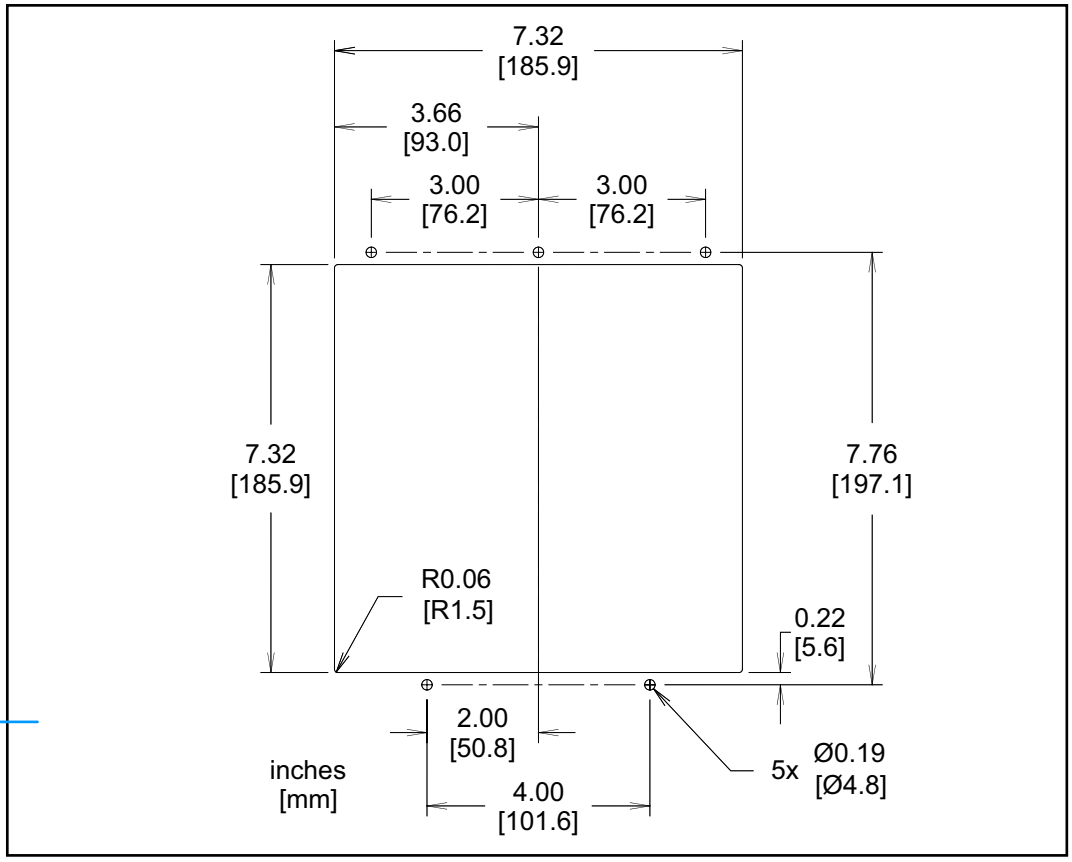
POWER XPERT 4000/6000/8000 GRAPHIC DISPLAY MODULE (PXD-MMG) PHYSICAL CHARACTERISTICS

- Sold separately - Supports a sub-network of a total of 16 meter modules



Display Module

GRAPHIC DISPLAY MODULE CUTOUT DIMENSIONS



Bomara Associates

Phone: 800.5BOMARA (800.526.6272)

Phone: 978.452.2299 Fax: 978.452.1169

3 Courthouse Lane, Chelmsford, MA 01824 USA