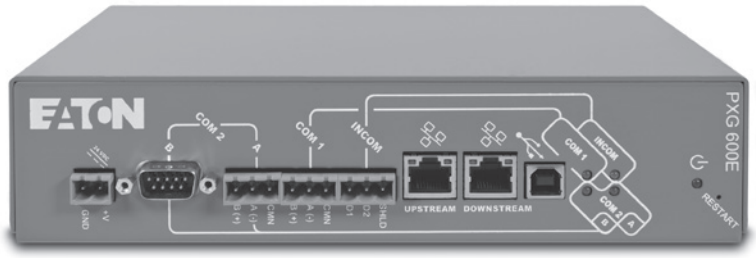
Power Xpert Gateway 600E



Delivers real-time, Web-enabled monitoring of electrical distribution and control equipment

Product snapshot

The Power Xpert® Gateway 600E is typically installed in an electrical assembly – a motor control center, low/medium voltage switchgear or switchboard to consolidate data available from components such as trip units, meters, motor controllers and protective relays.

Product overview

- Open communication architecture
  - Connects to both Eaton® and third-party electrical equipment; communicates to INCOM, QCPort and Modbus RTU devices
  - Modbus TCP, SNMP and BACnet/IP support facilitates integration with third-party monitoring solutions
  - Ethernet/web based support utilizes your existing network infrastructure, reducing costs
- Flexible and expandable solutions
  - Stand-alone or small systems benefit from comprehensive, on-board Web pages; no additional programming or software is necessary for virtually out-of-the-box, plug-and-play functionality
  - Larger systems, such as campus installations or power systems with remote locations can view multiple PXGs via Power Xpert Software or a third-party monitoring system
  - Existing equipment can be connected to the PXG to reap the benefits of Power Xpert Architecture at minimal cost, without the need to upgrade
  - Systems are easily expanded by adding devices as needed; the PXG 600E supports up to 96 devices
- Information at a glance
  - Using a standard Web browser, view the PXG's Web pages that include a system summary status page and individual device detail pages
  - Comprehensive, well-organized device Web pages present measured parameters such as current, voltage, power, energy, frequency, power factor and voltage THD, just to name a few
  - Combine with Power Xpert Software for viewing multiple gateways and other power system equipment for more extensive power quality analysis
  - KYZ equipped meter applications allowing WAGES metering utilizing DIM

Monitoring energy in a networked world

Through standard onboard Web pages, Power Xpert Software or third-party software, Eaton's Power Xpert Gateway (PXG) 600E allows you to closely monitor the performance of your energy efficiency with easily accessed, real-time, Web-enabled data. Eaton's PXG 600E provides a central point to connect up to 96 devices to an Ethernet network. The gateway may be used as a stand-alone device to view one system or location, or it can be easily integrated into a large, multi-location system.

The PXG is our data acquisition solution for facility equipment like switchgear, switch boards, motor control centers, etc. Energy data from the downstream devices are time stamped and stored in non-volatile memory. This interval data can be stored or updated to a destination of the users choice through CSV. Data can also be accessed through any Web browser directly on the PXG. Users can move data into Power Xpert Software, BMS, NMS, building dashboards, custom software applications, or virtually any Web interface.

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Features and benefits

Rugged, industrial design

- Designed specifically for industrial environments, the PXG has a compact, metal case that only requires convection cooling
- Stringent EMI design requirements ensure that the PXG will function in the most difficult EMI situations to deliver high reliability
- Mounting options are provided for panel mounting or DIN rail, allowing for installation flexibility

Smart configuration and user interface

- As an out-of-the-box, plug-and-play device, there is no additional software required to configure and view downstream devices
- All configuration menus are straightforward and easy to follow
- Upon configuring the PXG and associated devices, the data will automatically appear in the Web UI when you point your browser to the IP address of the PXG

Enclosed Version

- Cost effective solution to add communications to new or existing equipment that has no physical space to install the PXG-E in the equipment structure
- NEMA 12 Enclosure rating
- Prewired with a ELC-PS02 power supply and Terminal Blocks for ease of wiring of incoming power and connected devices

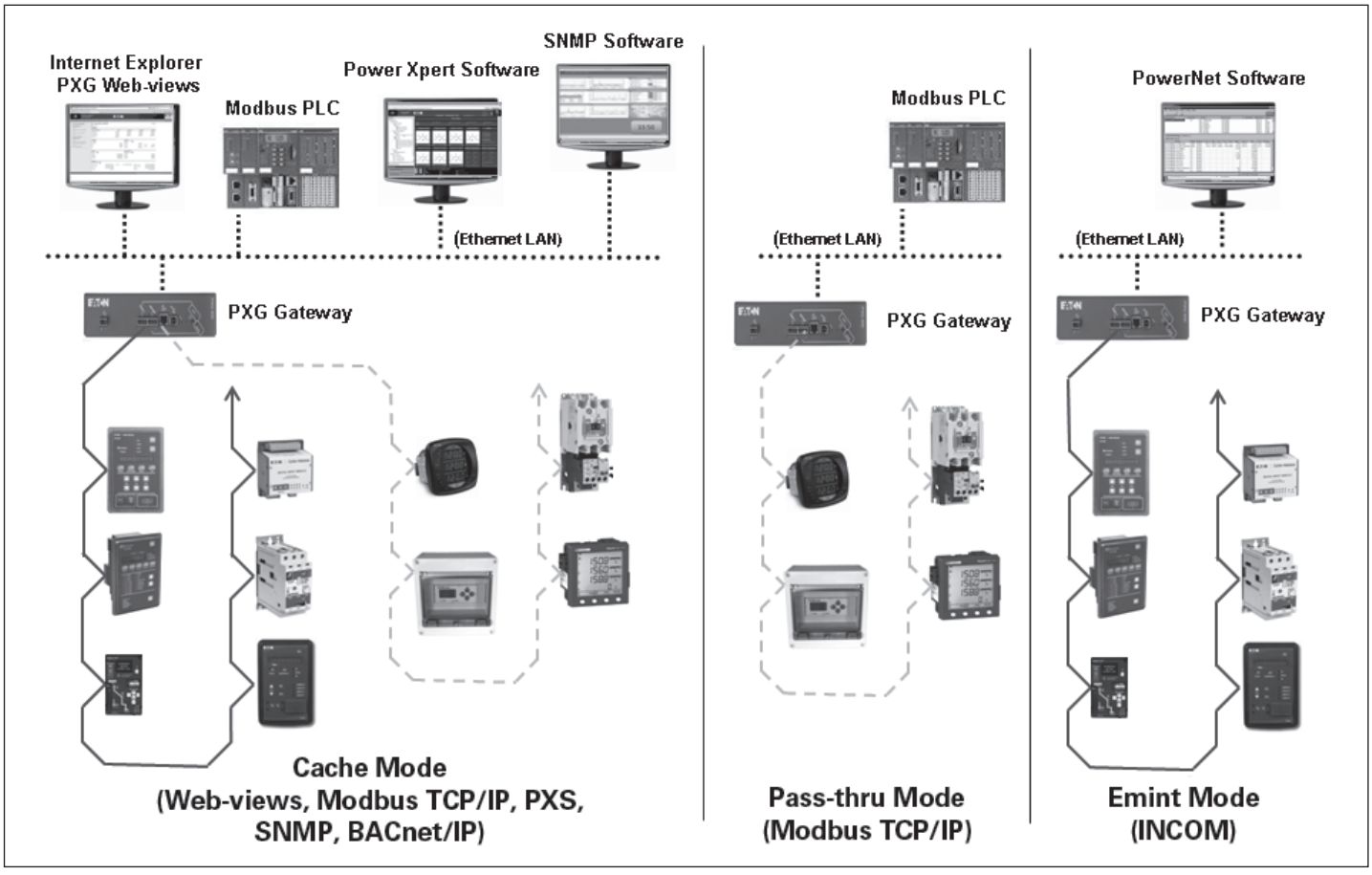
Three operational modes

The Power Xpert Gateway can operate in three modes, simultaneously if required, providing flexibility for varying protocols, devices and systems. While the Power Xpert Gateway can operate in each mode, Eaton recommends the entire solution be considered when choosing which gateway to use. For example when requiring only a "pass through" mode, the PXG 400E may be a better fit. For further details of each operational mode, see user manual. For a graphical representation of each mode, see Figure 1.

1. INCOM Pass-Through Mode (EMINT Mode)
   INCOM Pass-Through Mode allows data from INCOM serial devices to flow directly through the gateway to be viewed in PowerNet software for logging and consolidation with other connected devices.
   - Expansion of an existing PowerNet system with additional equipment can be easily achieved by adding a PXG400E to the system to bring the INCOM communicating devices online in INCOM pass through mode.

2. Modbus RTU to Modbus TCP Pass-Through Mode
   The Modbus RTU-Modbus TCP Pass-Through Mode allows information from Modbus serial devices to pass directly through the gateway to be viewed by a (or multiple) Modbus TCP monitoring software, i.e. an existing Building Management System.
   - The PXG allows users to do simple protocol translation, without any configuration in the PXG for those applications where they need Modbus TCP to bring devices into their existing system.

Figure 1. Three operational modes



The flexibility of the PXG for simple Modbus protocol translation in conjunction with other mode's makes the PXG more than a simple Modbus protocol translator.

3. Web Browser or Cache Mode
   Cache mode allows data from INCOM serial devices, Modbus serial devices and QC Port serial devices into the gateway, creating real-time viewing status through a web browser as well as logging for historical reference and trending in some models. Cached data from the serial devices can be shared with other client software similar to pass through.
   - The PXG in cache mode serves as an acquisition tool and provides the ability for users to view their serial devices on the serial networks connected to the PXG through a web browser. This allows users to bring power infrastructure equipment online to monitor operation and record power and energy usage.

Secure communication

- **Password Protection**
  Two levels of authorized access to data via the user interface
  1. User level permits viewing the data only
  2. Admin level permits configuration and changing settings, in addition to viewing data
- **Secure Web browsing**
  SSL Encryption option ensures that information and passwords exchanged with the PXG's Web server cannot be intercepted on the LAN
- **Access Control/Trusted Host List**
  Provides an additional method of security by limiting access to the communication ports by authorized trusted hosts IP addresses

Time synchronization

The PXG supports synchronization of clocks on INCOM devices that support the set time and date command. Additionally, the PXG can be combined with a network time server for accurate time stamping via NTP.

Real-time trending and viewing

The PXG 600E allows the user to enable pre-selected parameters to be trended for each supported device. This feature is user-selectable on the device configuration page. A trend symbol is displayed next to the trended parameter on the device page. Selecting the trend symbol will generate a real-time graph via the Web UI for that parameter and can be viewed for the past 24 hours, seven days, 30 days or all past history.

Interval and event logging and analysis

The PXG 600E stores both historical data and events that can be downloaded into a comma separated value (CSV) file format. Using Excel will allow you to perform analysis to discover potential system issues or proactively performing maintenance.

Waveforms capture and downloads

The PXG 600E supports waveform acquisition for supported devices capable of generating waveforms. This feature is user-selectable on the device configuration page. The waveform files are converted and stored as a COMTRADE file format in the PXG 600E. The files can then be downloaded and viewed using a standard COMTRADE waveform viewer of your choice.

Summary of PXG 600E Features

Features	PXG 600E
Total number of supported devices	96
Maximum number of INCOM devices supported	64
Protocols supported on downstream devices: INCOM, QCPort and Modbus RTU	Yes
Number of downstream communication ports	3
Number of downstream protocols supported simultaneously	3
USB port for configuration	Yes
Two RJ-45 Ethernet ports - 10/100 Base-T	Yes
Modbus TCP/IP protocol supported	Yes
SNMP client access v.1 and v.3	Yes
BACnet/IP	Yes
INCOM slave action commands supported	Yes
INCOM date and time settings supported	Yes
Modbus write commands supported from modbus master	Yes
Device summary screen per main, bus and device	Yes
Device waveform access and storage – COMTrade file format	Yes
Set user-defined events	Yes
Real-time trending	Yes
Trend graphs displayed in Web browser	Yes
Data logging – csv file format, downloadable to Excel	Yes
Event notification via the Web interface	Yes
Event logs – csv file format, downloadable to Excel	Yes
Interval logs – csv file format, downloadable to Excel	Yes
Email notification on events and threshold alarms	Yes
Secure Ethernet communications - SSL encryption	Yes
Secure communication ports via access control/trusted host list	Yes
IPv4 & IPv6 support	Yes
Custom summary user view creation	No
Ability to create custom events	No
Save and restore configuration settings	Yes
Control commands supported	Yes (downloadable)

The Eaton Power Xpert Gateway 600E includes:

The Power Xpert Gateway Module
Mounting provisions and required hardware for panel and DIN rail mounting
CD-ROM: contains the User Manual, Modbus Register Maps, USB Driver and other associated files

Supported control commands

The PXG 600E supports select control commands, or writes, for INCOM and Modbus RTU devices via the Web interface. Please contact Eaton's Technical Support for information on supporting control commands.

User-defined events

The PXG 600E supports the setting of user-defined events on an individual device basis. This feature is set via the device configuration page. An example of a user-defined event would be a Low and High limit on Phase A Current for a device. The event limit values and the event names can be chosen by the user. These event notices behave in the same manner as the Device Events described above.

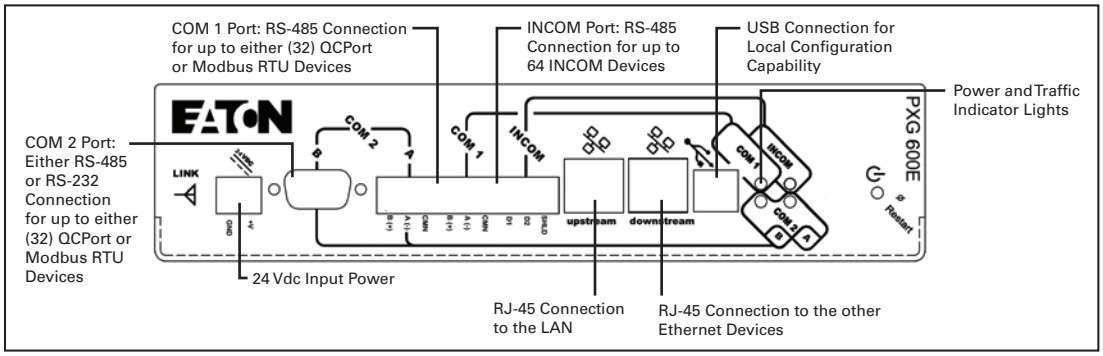
Email notification

You have the ability to customize and direct email notifications to up to 10 users in your organization. Select from event notifications, data logs, interval log, event logs and heartbeat emails. This provides yet one more way to effectively and proactively manage your power system.

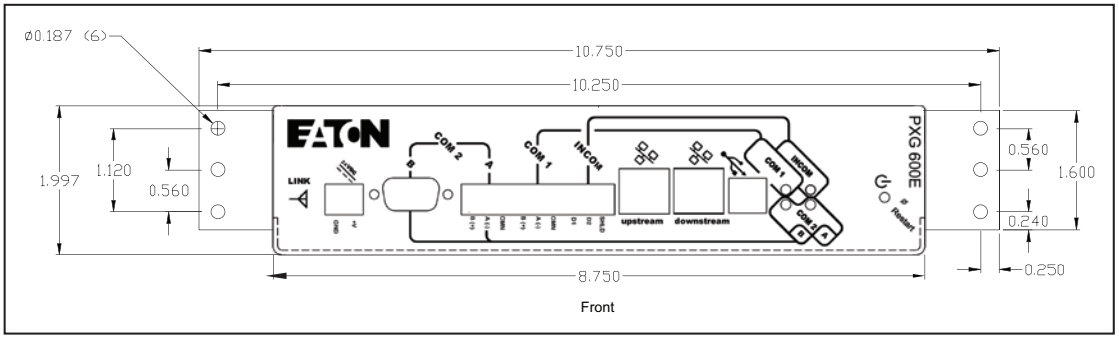
Save and restore configuration settings

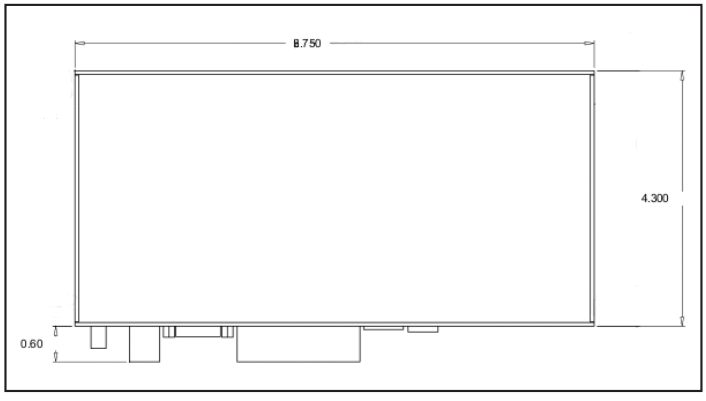
The PXG provides the ability to save the PXG device and network configuration settings to an XML file format. It can be used to restore settings to that PXG or any other PXG to facilitate configuration of similar systems.

Power Xpert Gateway 600E

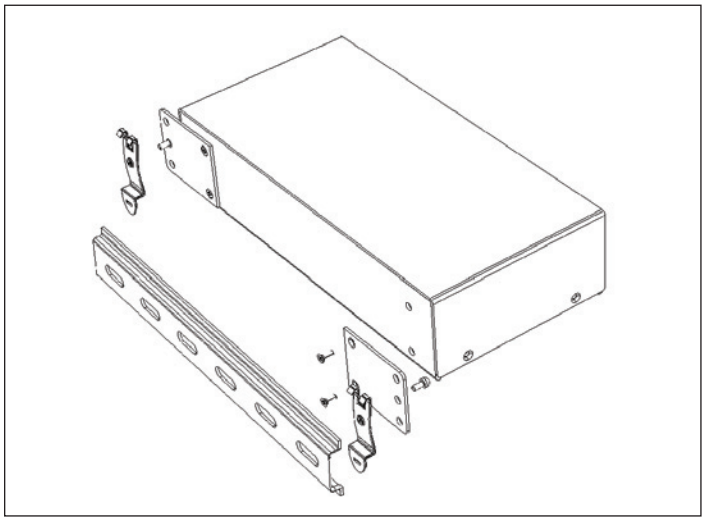


Power Xpert Gateway 600E with standard panel mounting (brackets included)

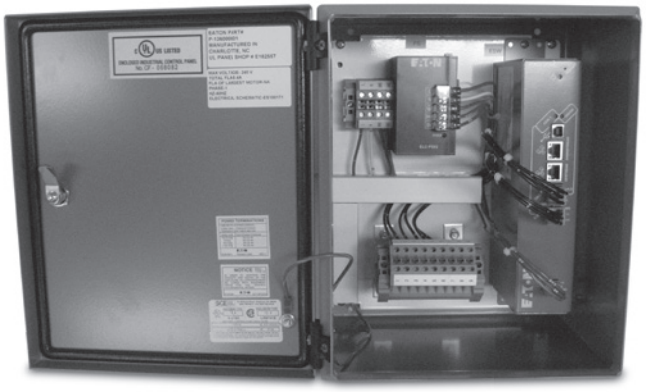


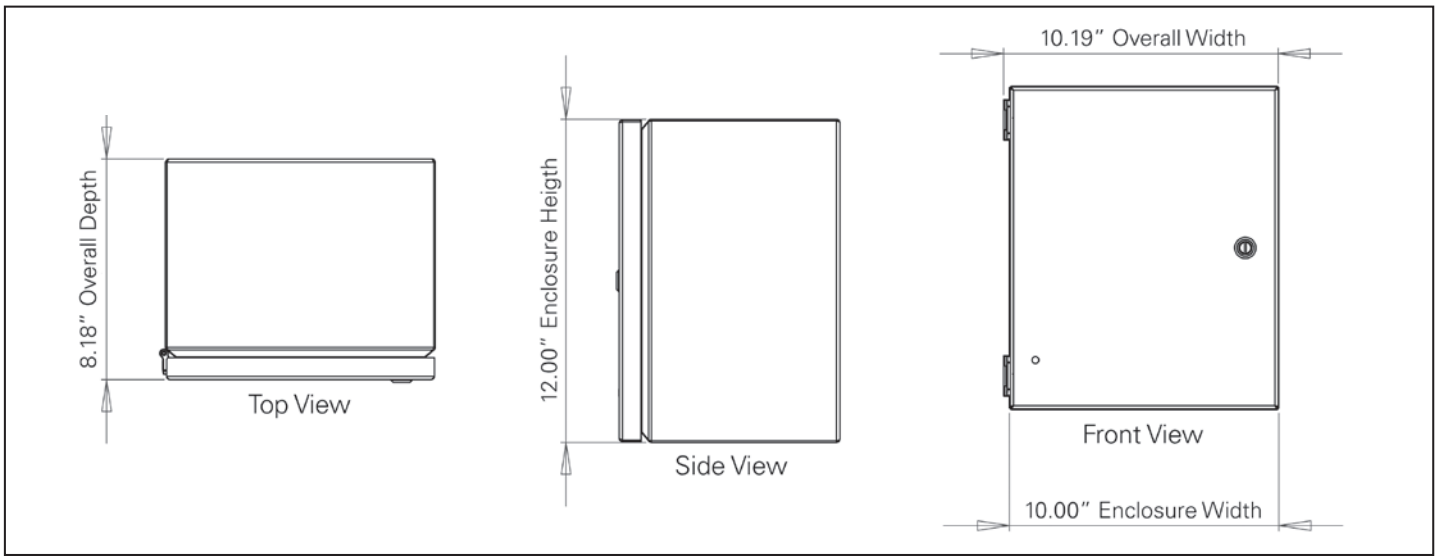


Power Xpert Gateway 600E with DIN rail mounting (brackets included)



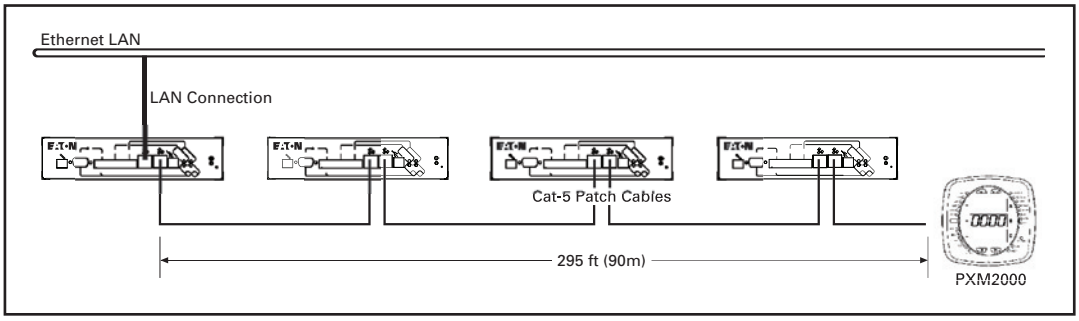
Power Xpert Gateway Enclosed Version





PXG-E Daisy Chain Application

The PXG-E allows for units to be connected together through two RJ-45 10/100 connectors on the front of the PXG-E series of products. This arrangement is a pass-through of Ethernet communications allowing a single network drop to connect up to five Ethernet communicating devices. The maximum length of a copper cable run should not exceed 295 ft (90m) total.



Note: In this configuration, if any of the PXG-E units go offline or lose power, the communication to the downstream Ethernet devices will lose connection to the LAN.

Data acquisition and integration table for supported devices

Supported Devices

Protocol	Device Type	Device Name	HTTP (Web Browser	Web Services (Power Xpert Software)	Modbus TCP (BMS & SCADA)	Pass-through INCOM (PowerNet)	Pass-through QCPort (CHStudio)	SNMP (NMS)	SMTP (Email Client)	File Export (CSV file format)	File Export (COMTRADE file format)	BACnet/IP
INCOM	Drive	Accutrol 400	•	•	•	•		•	•	•		•
	Drive	AF97	•	•	•	•		•	•	•		•
	I/O	Universal RTD	•	•	•	•		•	•	•		•
	I/O	DIM	•	•	•	•		•	•	•		•
	Meter	IQ DP-4000	•	•	•	•		•	•	•		•
	Meter	IQ Energy Sentinel	•	•	•	•		•	•	•		•
	Meter	IQ220 / IQ320	•	•	•	•		•	•	•		•
	Meter	IQ230 / IQ330	•	•	•	•		•	•	•		•
	Meter	IQ Analyzer (6000/6200)	•	•	•	•		•	•	•	•	•
	Meter	IQ Analyzer (6400/6600)	•	•	•	•		•	•	•	•	•
	Meter	IQ Data	•	•	•	•		•	•	•		•
	Meter	IQ Data Plus	•	•	•	•		•	•	•		•
	Meter	IQ Data Plus II	•	•	•	•		•	•	•		•
	Meter	Power Manager	•	•	•	•		•	•	•		•
	Meter	IQ Power Sentinel	•	•	•	•		•	•	•		•
	Meter	IQMESII	•	•	•	•		•	•	•		•
	Meter	PM3	•	•	•	•		•	•	•		•
	Protective	DigiTrip 3000	•	•	•	•		•	•	•		•
	Protective	DigiTrip 3200	•	•	•	•		•	•	•		•
	Protective	FP-5000	•	•	•	•		•	•	•	•	•
	Protective	FP-4000	•	•	•	•		•	•	•	•	•
	Protective	MP-3000	•	•	•	•		•	•	•		•
	Protective	MP-4000	•	•	•	•		•	•	•		•
	Protective	DigiTrip 520MC	•	•	•	•		•	•	•		•
	Protective	IQ 500	•	•	•	•		•	•	•		•
	Protective	MPCV Relay	•	•	•	•		•	•	•		•
	Protective	DigiTrip 1150/DT1150V	•	•	•	•		•	•	•	•	•
	Protective	DigiTrip 810	•	•	•	•		•	•	•		•
	Protective	DigiTrip 910	•	•	•	•		•	•	•		•
	Protective	DigiTrip MV	•	•	•	•		•	•	•		•
	Protective	Digitrip OPTIM 1050	•	•	•	•		•	•	•	•	•
	Protective	Digitrip OPTIM 550	•	•	•	•		•	•	•		•
	Protective	Digitrip OPTIM 750	•	•	•	•		•	•	•		•
	Protective	FP-6000	•	•	•	•		•	•	•	•	•
	I/O	DIM-KYZ	•	•	•	•		•	•	•		•
	Starter	Advantage	•	•	•	•		•	•	•		•
	Starter	Advantage ACM	•	•	•	•		•	•	•		•
	Sub-network Master	AEM II	•	•	•	•		•	•	•		•
	Sub-network Master	BIM II	•	•	•	•		•	•	•		•
	Sub-network Master	CMU	•	•	•	•		•	•	•		•
	Sub-network Master	IQ CED II	•	•	•	•		•	•	•		•
	Transfer Switch	ATC-400	•	•	•	•		•	•	•		•
	Transfer Switch	ATC-600	•	•	•	•		•	•	•		•
	Transfer Switch	ATC-800	•	•	•	•		•	•	•		•

Supported Devices (cont.)

Protocol	Device Type	Device Name	HTTP (Web Browser	Web Services (Power Xpert Software)	Modbus TCP (BMS & SCADA)	Pass-through INCOM (PowerNet)	Pass-through QCPort (CHStudio)	SNMP (NMS)	SMTP (Email Client)	File Export (CSV file format)	File Export (COMTRADE file format)	BACnet/IP
Modbus	Drive	MVX9000	•	•	•		•	•	•			•
	Drive	SVX9000	•	•	•		•	•	•			•
	Insulation Monitor	Insulgard	•	•	•		•	•	•			•
	Meter	IQ230M / IQ330M	•	•	•		•	•	•			•
	Meter	IQ250	•	•	•		•	•	•			•
	Meter	IQ260	•	•	•		•	•	•			•
	Meter	SQD CM3000 Series	•	•	•		•	•	•			•
	Meter	SQD CM4000 Series	•	•	•		•	•	•			•
	Meter	SQD PM710	•	•	•		•	•	•			•
	Meter	SQD PM850	•	•	•		•	•	•			•
	Meter	PML 7350	•	•	•		•	•	•			•
	Meter	PML 7550	•	•	•		•	•	•			•
	Meter	PML 7650	•	•	•		•	•	•			•
	Protective	GE 369 Motor Relay	•	•	•		•	•	•			•
	Protective	GE 469 Motor Relay	•	•	•		•	•	•			•
	Temp Monitor	Qualitrol 118	•	•	•		•	•	•			•
	Transformer Differential Relay	ABB TPU 2000	•	•	•		•	•	•			•
	Overload Relay	C441	•	•	•		•	•	•			•
	Protective	FP-5000	•	•	•		•	•	•			•
	Protective	FP-6000	•	•	•		•	•	•			•
	Protective	EDR-3000	•	•	•		•	•	•			•
	Meter	IQ130	•	•	•		•	•	•			•
	Meter	IQ140	•	•	•		•	•	•			•
	Meter	IQ150	•	•	•		•	•	•			•
	Meter	Nexus 1262/1272	•	•	•		•	•	•			•
	Meter	IQ35M	•	•	•		•	•	•			•
QCPort	I/O	D77A-AI16	•	•	•		•	•	•	•		•
	I/O	D77A-AI8	•	•	•		•	•	•	•		•
	I/O	D77A-DI16	•	•	•		•	•	•	•		•
	I/O	D77A-DI8	•	•	•		•	•	•	•		•
	Starter	IT S811 (MV811)	•	•	•		•	•	•	•		•
	Starter	IT Starter	•	•	•		•	•	•	•		•
	Starter	IT Starter Qsnap	•	•	•		•	•	•	•		•

Device parameters displayed via the PXG Web UI

The table below represents many of the parameters displayed on the Web UI page for a given device; however it is not exhaustive. For the complete list of parameters displayed, per device, refer to the Device Data Map file at **www.eaton.com/pxg**.

		IQ Meters																			Circuit Breaker Trip Units								Protective		
	Units	IQ Data Plus II	IQ Data Plus	IQ Data	IQ Analyzer 6000/6200	IQ Analyzer 6400/6600	IQ DP-4000	IQ 220/320	IQ 230/330	IQ 230/330M	IQ 250	IQ 260	IQ Power Sentinel	IQ Energy Sentinel	IQ MESII	IQ 130	IQ 140	IQ 150	IQ 35M	PM3	Power Manager	Digitrip 1150	Digitrip 520MC	Digitrip RMS 910	Digitrip RMS 810	Digitrip OPTIM 1050	Digitrip OPTIM 550	Digitrip OPTIM 750	Digitrip MV	Digitrip 3000	Digitrip 3200	IQ 500
Voltage																															
Average	V	-	-	-	x	x	-	-	-	-	-	-	-	-	-	-	-	-	x	x	-	-	-	-	-	-	-	-	-	-	-
Voltage (Line-Line)	V	x	x	x	x	x	x	x	x	x	x	x	x	-	-	x	x	x	x	x	-	x	-	x	-	-	-	-	-	-	-
Voltage (Line-Neutral)	V	x	x	x	x	x	x	x	x	x	x	x	x	-	x	x	x	x	x	x	x	-	-	-	-	-	-	-	-	-	-
Current																															
Average	A	-	-	-	x	x	-	-	-	-	-	-	-	-	-	-	-	-	x	x	-	-	-	-	-	-	-	-	-	-	-
Phase	A	x	x	x	x	x	x	x	x	x	x	x	x	-	-	x	x	x	x	x	-	x	x	x	x	x	x	x	x	x	x
Ground	A	-	-	-	x	x	-	-	-	x	-	-	-	-	-	-	-	-	-	-	-	x	x	x	x	x	x	x	x	x	x
Neutral	A	-	-	-	x	x	x	x	x	x	x	x	-	-	-	-	-	-	-	-	-	x	x	x	x	x	x	x	x	x	-
Peak	A	-	-	-	x	x	x	x	x	x	x	x	-	-	-	x	x	x	-	-	-	x	-	-	-	x	x	x	x	x	-
Demand	A	-	-	-	x	x	x	x	x	x	x	x	-	-	-	x	x	x	-	-	-	x	-	-	-	x	x	x	-	-	-
Power																															
Apparent	VA	-	-	-	x	x	x	x	x	x	x	x	x	-	-	-	x	x	x	x	-	x	-	-	-	-	-	-	-	-	-
Reactive	VAR	x	x	-	x	x	x	x	x	x	x	x	x	-	-	-	x	x	x	x	-	x	-	-	-	-	-	-	-	-	-
Real	W	x	x	-	x	x	x	x	x	x	x	x	x	x	x	-	x	x	x	x	x	x	-	x	x	x	-	-	-	-	-
Power factor																															
Apparent	PF	x	x	-	x	x	x	x	x	x	x	x	x	-	-	-	x	x	x	x	-	x	-	-	-	x	-	-	-	-	-
Displacement	PF	-	-	-	x	x	x	x	x	x	x	x	x	-	-	-	-	-	-	-	-	-	-	-	-	x	-	-	-	-	-
Energy																															
Real	Wh	x	x	-	x	x	x	x	x	x	x	x	x	x	x	-	-	x	x	x	x	x	-	x	x	x	-	-	-	-	-
Forward	Wh	-	-	-	x	x	x	x	x	x	x	x	-	-	x	-	x	x	-	x	-	x	-	x	x	x	-	-	-	-	-
Reverse	Wh	-	-	-	x	x	x	x	x	x	x	x	-	-	-	-	x	x	-	x	-	x	-	x	x	x	-	-	-	-	-
Apparent	Vah	-	-	-	x	x	x	x	x	x	x	x	-	-	-	-	-	x	x	x	-	x	-	-	-	-	-	-	-	-	-
Reactive	VARh	-	-	-	x	x	x	x	x	x	x	x	-	-	-	-	-	x	x	x	-	-	-	-	-	-	-	-	-	-	-
Leading	VARh	-	-	-	x	x	x	x	x	x	x	x	-	-	-	-	x	x	-	x	-	-	-	-	-	-	-	-	-	-	-
Lagging	VARh	-	-	-	x	x	x	x	x	x	x	x	-	-	-	-	x	x	-	x	-	-	-	-	-	-	-	-	-	-	-
Power quality																															
THD	%	-	-	-	x	x	x	-	-	-	-	x	-	-	-	-	-	-	-	-	-	-	-	-	-	x	-	-	-	-	-
Current THD	%	-	-	-	x	x	x	-	-	-	-	x	-	-	-	-	-	-	-	-	-	x	-	-	-	x	-	-	-	-	-
Voltage THD	%	-	-	-	x	x	x	-	-	-	-	x	-	-	-	-	-	-	-	-	-	-	-	-	-	x	-	-	-	-	-
Frequency	Hz	x	x	x	x	x	x	x	x	x	x	x	x	-	-	-	x	x	-	x	-	-	-	-	-	-	-	-	-	-	-
Waveform capture	n/a	-	-	-	x	x	x	-	-	-	-	-	-	-	-	-	-	-	-	-	-	x	-	-	-	x	-	-	-	-	-
Temperature																															
Ambient	C	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Auxillary	C	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Load bearing	C	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Motor bearing	C	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Winding	C	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Phase (L, C, R)	C	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Terminal block	C	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Input status																															
Count		-	-	-	x	x	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Status/cause of trip		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	x	x	x	x	x	x	x	x	x	x
Thermal memory		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Pole temp		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Winding temp		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Fan status		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Alarm/trip relay		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Relays							Insulation Monitor	Motor Starters & VFDs							Transfer Switches			I/O							Third-Party Devices											
MPVCV relay	FP-4000	FP-5000	MP-3000	MP-4000	FP-6000	EDR-3000	Insulgard	Accutrol 400	AF97	Advantage Starters	IT S811	IT. Starters/Qsnap	C441 Overload Relay	SVX & MVX Drives	ATC-400	ATC-600	ATC-800	Digital Input Module	D77A-AI16	D77A-AI8	D77A-DI16	D77A-DI8	Digital Input Module KYZ	Universal RTD	SQD CM 3000 Series	SQD CM 4000 Series	SQD PM 710	SQD PM 850	PML 7350	PML 7550	PML 7650	GE 369 Motor Relay	GE 469 Motor Relay	ABB TPU 2000	Qualitrol 118	Nexus 1262/1272
-	x	x	-	x	-	-	x	x	-	-	-	-	x	x	-	-	-	-	-	-	-	-	-	-	x	x	-	x	x	x	x	-	-	-	-	x
-	x	x	-	x	-	-	-	-	-	-	x	-	x	-	x	x	x	-	-	-	-	-	-	-	x	x	x	x	x	x	x	x	x	-	-	x
x	x	x	-	x	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	x	x	x	x	x	x	x	-	-	x	-	x
-	x	x	x	x	-	-	x	x	-	-	x	x	x	x	-	-	-	-	-	-	-	-	-	-	x	x	x	-	x	x	x	x	x	-	-	x
x	x	x	x	x	-	x	-	-	x	x	x	-	-	-	-	-	-	-	-	-	-	-	-	-	x	x	x	x	x	x	x	x	x	x	x	x
-	x	x	x	x	x	-	-	-	-	-	-	-	x	-	-	-	-	-	-	-	-	-	-	-	x	x	-	-	-	-	-	x	x	-	-	-
-	x	x	-	-	x	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	x	x	x	-	x	x	x	-	-	-	-	x
-	x	x	-	-	-	x	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	x	x	x	x	x	x	x	-	-	-	-	x
-	x	x	-	-	-	x	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	x	x	x	x	x	x	x	-	x	x	-	x
-	x	x	-	x	-	-	-	x	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	x	x	x	x	x	x	x	-	x	x	-	x
x	x	x	-	x	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	x	x	x	x	x	x	x	x	x	x	-	x
x	x	x	-	x	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	x	x	x	x	x	x	x	x	x	x	-	x
-	x	x	-	x	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	x	x	x	x	x	x	x	x	x	x	-	x
-	x	x	-	x	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	x	x	x	-	-	-	-	-	-	-	-	-
-	x	x	-	x	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	x	-	x	x	x	x	x	x	x	x	x	x	-	x
-	x	x	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	x	x	-	x	x	x	x	-	x	-	-	x
-	x	x	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	x	x	-	x	x	x	x	-	-	-	-	x
-	x	x	-	x	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	x	x	x	x	x	x	x	-	-	-	-	-
-	x	x	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	x	x	x	x	x	-	-	-	-	-	-	-
-	x	x	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	x	x	-	x	x	x	x	-	-	-	-	x
-	x	x	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	x	x	-	x	x	x	x	-	-	-	-	x
-	-	-	-	-	x	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	x	-	-	-	-	-	-	-	-
-	x	x	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	x
-	x	x	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	x
-	x	x	-	-	-	-	x	x	-	-	-	-	x	x	x	x	x	-	-	-	-	-	-	-	x	x	x	x	x	x	x	x	x	-	-	x
-	x	x	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	x	-	-	-	-	-	-	x	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	x	x	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	x	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	x	x	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	x	-	-	-	-	-	-	-	x	x	-	-	-
-	-	-	x	x	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	x	-	-	-	-	-	-	-	x	x	-	-	-
-	-	-	x	x	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	x	-	-	-	-	-	-	-	x	x	-	-	-
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x	x	x	2	2	x	-	-	-	-	-	x	x	-	x	-	-	-	8	16	8	16	8	4	-	-	-	-	-	-	-	-	-	-	-	-	8
x	x	x	x	x	x	-	-	-	-	-	x	x	x	x	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	x	x	-	-	-
-	-	-	-	-	-	-	-	-	-	-	x	x	x	x	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	x	x	-	x	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	x	x	-
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	x	x	-
-	-	-	-	-	x	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	x	x	-

Technical specifications

PXG part numbers

Eaton catalog number	Eaton style number	Description
PXG600E	103008422-5591	Power Xpert Gateway 600E
ELC-PS02	ELC-PS02	Power Supply - 24 VDC
PXGACC01	66B2146G01	Mounting Bracket Kit
PXG600E-2A	P-136000003	Enclosed Model

Memory

Flash: 1 GB
RAM: 128 MB

Communication ports

Network port	Two 10/100 Base T RJ-45 connector
Serial ports	One RS-485 port for connection to either QCPort or Modbus RTU devices one dedicated RS-485 port for INCOM devices one RS-485 or RS-232 port for connection to either QCPort or Modbus RTU devices
Configuration port	One USB port

Network protocols supported

Modbus TCP/IP	Supports data access from Modbus TCP clients
Web server	Supports data access from Web browsers (HTTP and HTTPS)
DHCP	Supports automatic IP address assignments, if enabled
SNMP	Supports common network management tools
NTP	Supports time synchronization via a network time server for PXG synchronization
SMTP	Supports mail server for email notification
BACnet/IP	Supports data from BACnet clients

Serial protocols supported

INCOM
QCPort
Modbus RTU

Web browsers recommended

IE 6.0 and higher
Mozilla Firefox 2.0 and higher

Number of devices supported

96 total with INCOM Port + COM 1 Port + COM 2 PORT not to exceed 96 devices
Port limitations are as follows:
• INCOM Port: Up to 64 INCOM devices
• COM 1 Port: Up to 32 QCPort or Modbus RTU devices
• COM 2 Port: Up to 32 QCPort or Modbus RTU devices

Power input

Input voltage, nominal: 24 VDC; 0.8A
Input voltage range: +/- 20% Nominal

Power consumption

8 watts maximum

Operating temperature

32 to 140° F (0 to 60° C)

Ambient storage temperature

-40 to 185° F (-40 to 85° C)

Relative humidity

5 to 95% non-condensing at 122° F (50° C)

Size (H x D x L)

2.1" x 4.5" x 8.9"

Weight

1.5 pounds

Regulatory and standards compliance

UL 508, Standard for Programmable Controller Equipment
FCC, Class A, Part 15, Subpart B, Sections 15.107b & 15.109b
EN55022: 1994 Class A, Information Technology Equipment
EN 61000-6-2:2001 Electromagnetic Compatibility (EMC) Party 6-2: Immunity for Industrial Environments

Enclosed Version

Enclosure Rating	NEMA 12
ELC-PS02 Power Supply	Power Input: 100-240VAC 50/60Hz Output Power: 24VDC (+/-3%) Output Current: 2A max. Environmental: Operating Temp. Range: 0-55° C Storage Temp. Range: -25-70° C Relative Humidity: 50-95% For additional information on the ELC-PS02 refer to IL05003007E.
Size (dimensions) HxDxW	12"x8.18"x10.19"
Weight	16 lbs.
Regulatory and Standard Compliance	UL Panel Shop #: E182557 cULus listed

Note: Features and specifications listed in this document are subject to change without notice and represent the maximum capabilities of the product with all options installed. Although every attempt has been made to ensure the accuracy of information contained within, Eaton makes no representation about the completeness, correctness or accuracy and assumes no responsibility for any errors or omissions. Features and functionality may vary depending on selected options.

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