



For electric utilities



Product range overview

## PowerLogic™ energy information systems



The world's largest and most advanced range of meters and software for helping electric utilities manage network-level revenue metering and control risks to reliability.

**Schneider**  
Electric



## Energy insight = energy control

Whether you generate, transmit or distribute electricity, today's energy market is more complex than ever before. More stakeholders need shared access to timely, accurate energy data from more exchange points. You need to maintain power availability and reduce price volatility in the face of rising demand and transmission congestion.

Meeting all of these requirements while staying competitive and profitable can be a daunting challenge. PowerLogic energy information systems from Schneider Electric will help you make the most of your energy by:

- Metering all key interchange points with the highest possible accuracy.
- Improving the quality of power delivered to your customers.
- Assuring the reliability and efficiency of your network and equipment.

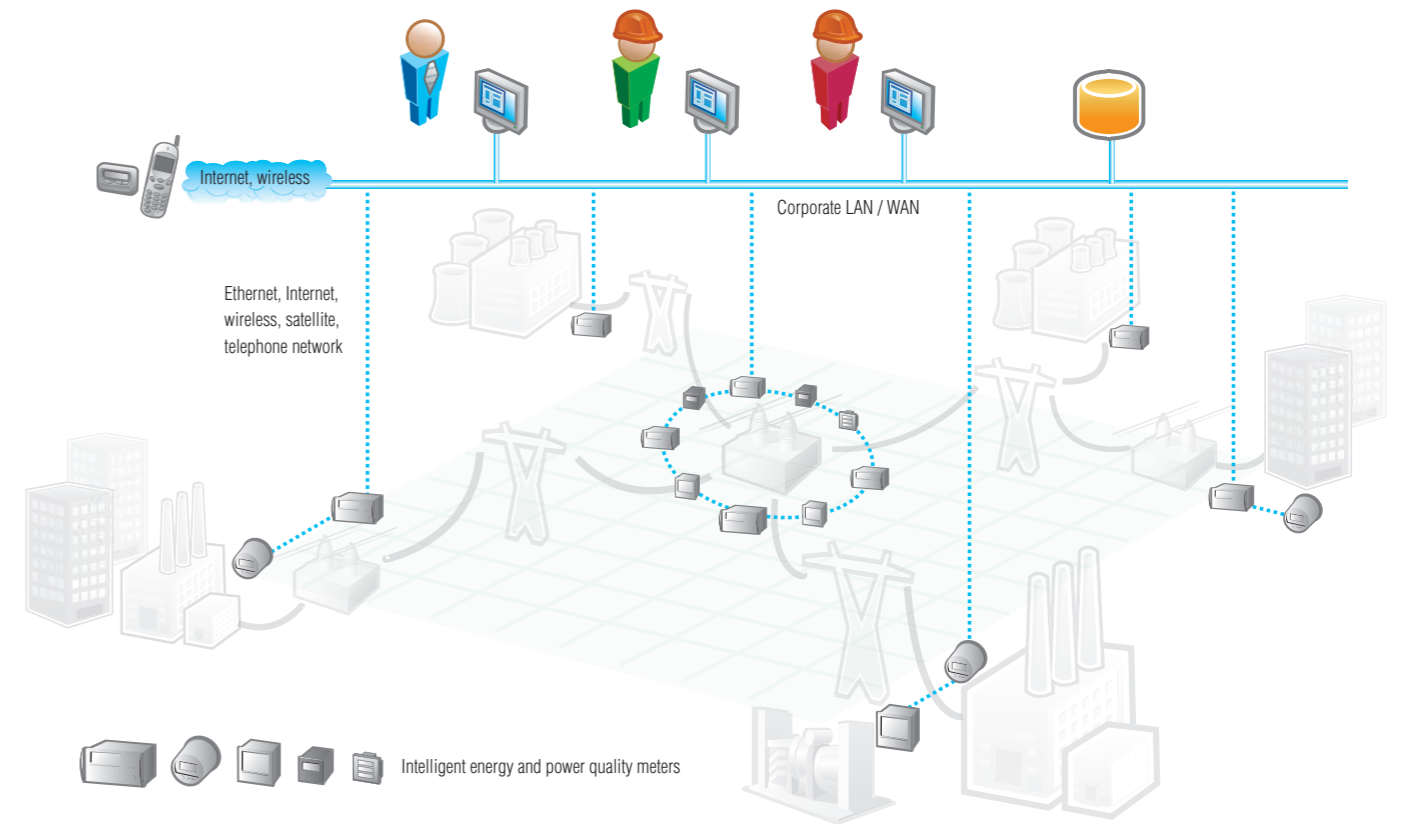
From advanced energy and power quality metering systems to enterprise-level analytic software, PowerLogic delivers business-critical information that conventional metering, SCADA and billing systems cannot. It gives you the energy intelligence and control needed to track performance, stay informed of critical conditions and empower you to make strategic decisions. It will help you increase reliability, maximise the use of resources and improve service.

Thousands of utilities around the globe are using PowerLogic systems to meet new regulated requirements, work more efficiently and maintain or improve the integrity of their networks. And it can do the same for you by helping you achieve your operational goals, all with a fast and quantifiable return on investment.

This brochure will introduce you to PowerLogic products, systems and applications. For more information and help with system selection and implementation, please contact your local Schneider Electric representative or visit [www.powerlogic.com](http://www.powerlogic.com).



Meet new challenges with higher accuracy metering and higher network integrity



## Advanced technology makes it easy

PowerLogic is the world's largest and most advanced range of metering and software products for managing energy. Products and systems are cost-effective due to having a low cost of installation and ownership, being feature-rich and delivering multiple financial benefits. Products support important local and global standards, including accuracy certifications and international power quality compliance reporting.

A PowerLogic system acts like a layer of intelligence across all of your energy assets. Key distribution points are monitored 24 hours a day, from generators and substations to the service entrances of your largest customers. Advanced meters offer multi-port, multi-protocol communication that enables tight integration with diverse automation systems.

At the administrative level, data on real-time conditions and historical performance are unified into a single, accessible repository. Timely, relevant information is delivered to anyone that needs it, wherever they are. Powerful web-based portals give multiple stakeholders easy-to-use analytic, reporting, alarm annunciation and control capabilities. These will help you improve problem response time and keep your customers happy.

A PowerLogic solution fits with your workflow, and works seamlessly with other Schneider Electric power and automation solutions. It also shares information directly with your business, accounting and billing applications. Solutions are highly scalable, letting you take advantage of modular components to add to or upgrade your systems affordably as required.

### Multiple financial and operational benefits

#### Revenue metering and power quality



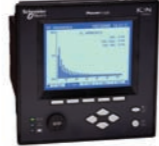
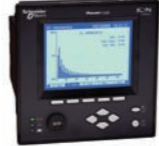




- Maximise metering accuracy at all interchange points
- Verify compliance with new power quality standards
- Analyse and isolate the source of power quality problems

#### Energy availability and reliability

- Improve T&D network reliability
- Enhance substation automation
- Maximise the use of your existing infrastructure

# PowerLogic high-accuracy energy and power quality metering for every distribution point<sup>1</sup>

- Ideally suited for use in all electrical environments and compatible with all PowerLogic software solutions.
- Standardised configuration, flexible customisation, modular I/O and communications, and remote display options.
- Support for international utility standards, form factors and protocols.

	Advanced revenue metering, energy metering and power quality analysis						Midrange energy metering and power quality analysis			Basic energy sub-metering		
												
Features <sup>2</sup>	ION8800			ION8600			ION7650	ION7550	ION7350	ION7330	ION7300	ION6200
	A	B	C	A	B	C						
<b>Inputs, outputs and control power</b>												
3-phase / single-phase	■ / ■	■ / ■	■ / ■	■ / ■	■ / ■	■ / ■	■ / ■	■ / ■	■ / ■	■ / ■	■ / ■	■ / ■
Digital in and out / analog in and out	16 /	16 /	16 /	16 / 4	16 / 4	16 / 4	20 / 8	20 / 8	8 / 8	8 / 8	4 / 8	2 /
Power supply options	AC/DC	AC/DC	AC/DC	AC/DC	AC/DC	AC/DC	AC/DC	AC/DC	AC/DC	AC/DC	AC/DC	AC/DC
<b>Power and energy measurements</b>												
Voltage, current, frequency, power factor	■	■	■	■	■	■	■	■	■	■	■	■
Power, demand	■	■	■	■	■	■	■	■	■	■	■	■
Energy / time-of-use (energy per shift)	■ / ■	■ / ■	■ / ■	■ / ■	■ / ■	■ / ■	■ / ■	■ / ■	■ / ■	■ / ■	■ / ■	■ /
IEC / ANSI energy accuracy class (% of reading)	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.5	0.5	0.5	0.5
Loss compensation	■	■	■	■	■	■	■	■				
<b>Power quality analysis</b>												
EN50160 compliance reporting / IEC 61000-4-30 Class A standard	■ / ■	■ / ■		■ /			■ / ■					
Flicker measurement	■	■		■			■					
Transient detection / disturbance direction	■ /			■ /			■ / ■	/ ■				
Sag/swell monitoring	■	■	■	■	■	■	■	■	■	■	■	
Harmonic distortion: individual / total	■ / ■	■ / ■	■ / ■	■ / ■	■ / ■	■ / ■	■ / ■	■ / ■	■ / ■	■ / ■	■ / ■	/ ■
Uptime (number of 9's) calculation	■	■	■	■	■	■	■	■	■	■	■	
Waveform capture	■			■			■	■	■			
<b>On-board data and event logging</b>												
Trending / forecasting / billing	■ / / ■	■ / / ■	■ / / ■	■ / / ■	■ / / ■	■ / / ■	■ / ■ / ■	■ / ■ / ■	■ / / ■	■ / / ■		
Minimum / maximum	■	■	■	■	■	■	■	■	■	■	■	
Events and alarms with timestamps	■	■	■	■	■	■	■	■	■	■	■	
Timestamp resolution (seconds)	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001		
Computer-serial time sync. / Ethernet NTP time sync.	■ /	■ /	■ /	■ /	■ /	■ /	■ / ■	■ / ■	■ /	■ /		
GPS time sync.: serial / IRIG-B / DCF-77	■ / ■ /	■ / ■ /	■ / ■ /	■ / ■ /	■ / ■ /	■ / ■ /	■ / /	■ / /				
<b>Setpoints, alarms and control</b>												
Log alarm conditions / call out on alarm	■ / ■	■ / ■	■ / ■	■ / ■	■ / ■	■ / ■	■ / ■	■ / ■	■ /	■ /		
Trigger data logging / waveform capture	■ / ■	■ /	■ /	■ / ■	■ /	■ /	■ / ■	■ / ■	■ / ■	■ /		
Trigger relay or digital output	■	■	■	■	■	■	■	■	■	■		
<b>Special features</b>												
Custom programming: arithmetic / boolean / modular	■ / ■ / ■	■ / ■ / ■	■ / ■ / ■	■ / ■ / ■	■ / ■ / ■	■ / ■ / ■	■ / ■ / ■	■ / ■ / ■	■ / ■ / ■	■ / ■ / ■	■ / ■ / ■	■ / /
Downloadable firmware	■	■	■	■	■	■	■	■	■	■	■	
<b>Communications</b>												
Ports:												
Ethernet 10BaseT / 10BaseFL / 100BaseTX / 100BaseFX	■ / ■ / /	■ / ■ / /	■ / ■ / /	■ / ■ / /	■ / ■ / /	■ / ■ / /	■ / ■ / ■ / ■	■ / ■ / ■ / ■	■ / / /	■ / / /	■ / / /	
Ethernet-to-serial gateway	■	■	■	■	■	■	■	■	■	■	■	
Telephone modem	■	■	■	■	■	■	■	■	■	■	■	
Modem-to-serial gateway	■	■	■	■	■	■	■	■	■	■	■	
Infrared	■	■	■	■	■	■	■	■	■	■	■	
RS485 / RS232	■ / ■	■ / ■	■ / ■	■ / ■	■ / ■	■ / ■	■ / ■	■ / ■	■ /	■ /	■ /	■ /
Web server / email / SNMP / XML	■ / ■ / / ■	■ / ■ / / ■	■ / ■ / / ■	■ / ■ / / ■	■ / ■ / / ■	■ / ■ / / ■	■ / ■ / ■ / ■	■ / ■ / ■ / ■	■ / ■ / /	■ / ■ / /	■ / ■ / /	■ / / /
Protocols: Modbus™ / DNP / MV-90 / DLMS <sup>3</sup>	■ / ■ / ■ / ■	■ / ■ / ■ / ■	■ / ■ / ■ / ■	■ / ■ / ■ /	■ / ■ / ■ /	■ / ■ / ■ /	■ / ■ / ■ /	■ / ■ / ■ /	■ / ■ / ■ /	■ / ■ / ■	■ / / /	■ / / /

<sup>1</sup> This is not a complete list of meter models, features and specifications; please refer to the PowerLogic website, catalogue, technical data sheets or product brochures for more detail.

<sup>2</sup> Specifications represent maximum capabilities with all options installed; some options are not available concurrently. <sup>3</sup> ION8600, ION7650, ION7550 offer Modbus Master capabilities.

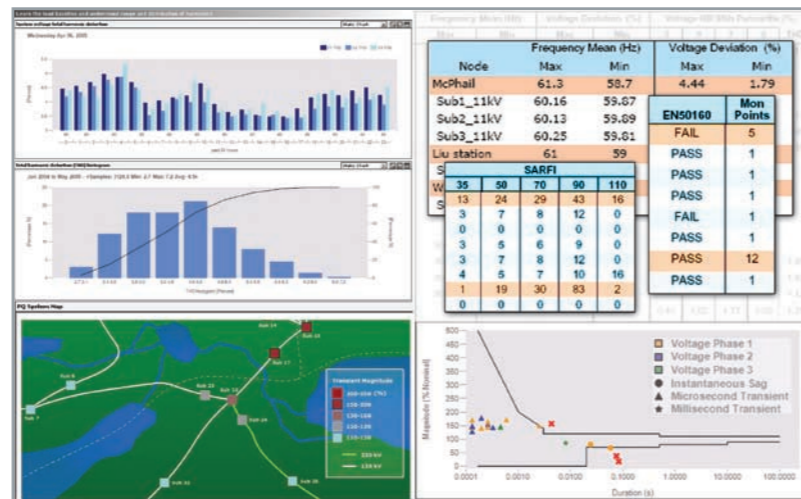
# Complementary, expansive software solutions

## PowerLogic ION™ EEM

A powerful offering that exceeds the traditional boundaries of energy operations software.

The software helps you perform wide-area analysis of events and conditions. Advanced analytics help you manage risks and efficiencies by gaining unique insight into the impacts of power quality on your business and all energy assets. Stakeholders from management to operations will reveal opportunities, isolate problems and drive cost and risk reduction strategies. This unifying application complements and extends the benefits of existing energy-related data resources. Data can be integrated from power management systems, metering systems, substation automation and SCADA systems, EMS and other enterprise business applications. Innovative visualisation tools help you accurately monitor, validate, predict and ultimately control the reliability and continuity of your network.

□ Features a true enterprise-level software architecture that includes data quality assurance, data warehouse and web framework. Automatically acquires data from all relevant resources including PowerLogic ION Enterprise, legacy metering systems, SCADA, DCS and EMS.

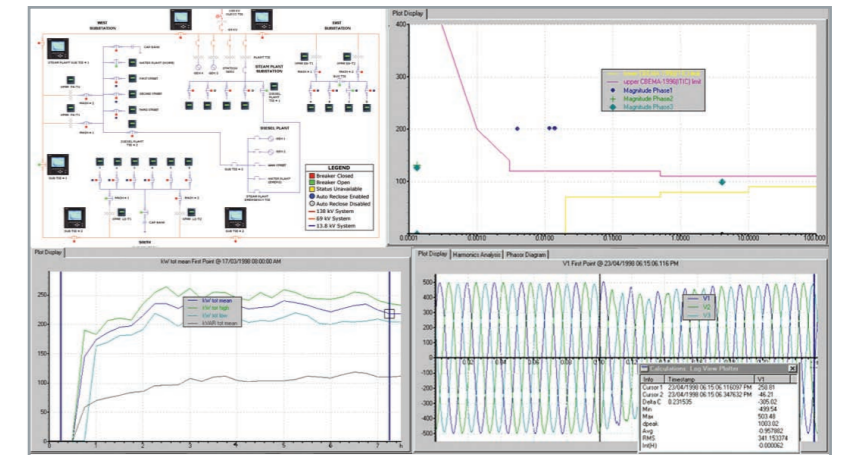


- Offers a web portal that presents personalised dashboards, key performance indicators, charts, trends and real-time conditions.
- Features rich reporting capabilities that offer customised content, support for complex data and graphics, and scheduled distribution.
- Includes advanced trending and visualisation with dimensional analysis, prediction and statistical roll-ups.
- Offers comprehensive power quality analysis that includes wide-area event monitoring and mapping, classification, filtering and correlation.

## PowerLogic ION Enterprise™

A complete power management solution for operations personnel.

The software collects and stores data from key electrical distribution points and physical assets. It tracks real-time conditions and analyses power quality and reliability, helping you respond quickly to critical situations before they cause equipment failures or downtime. It also helps you optimise equipment utilisation by studying historical trends to identify energy losses, reveal unused system capacity, and verify the results of equipment upgrades. Coordinated control capabilities can be used to manage substation equipment or generators.



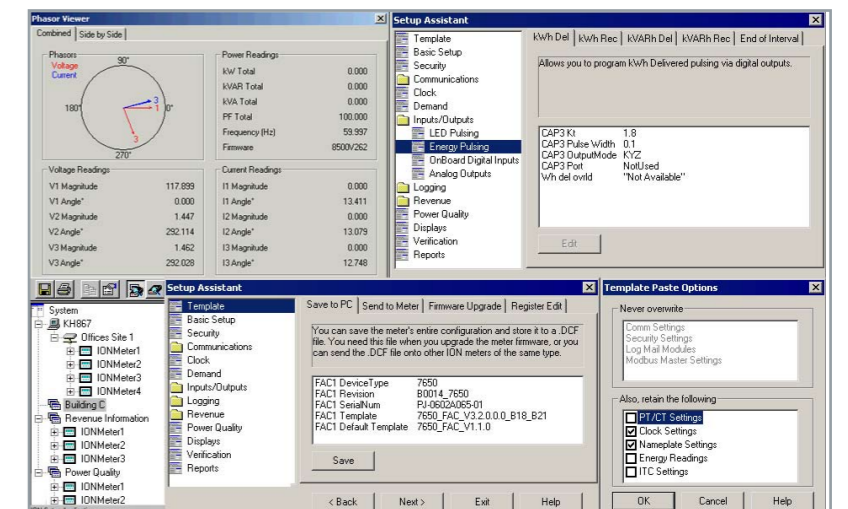
- Collects data automatically from remote devices using industry-standard network technologies, including Ethernet, telephone line, serial and wireless.
- Directly supports PowerLogic meters, Masterpact™ breakers equipped with Micrologic™ control units, and supports third-party meters, sensors, PLCs and other substation equipment through Modbus communications and OPC.
- Features a scalable, flexible architecture that lets you grow systems to hundreds of metering points while modular programming supports complex processing and control functions.
- Offers secure, customised browser-based access to graphical system views, real-time data, trending, events, alarm notification, and power quality analysis and reporting to international standards (IEC 61000-4-30, EN50160).
- Includes interoperability with PowerLogic ION EEM software or third-party systems through ODBC, OPC and PQDIF compliance.

## PowerLogic ION Setup

A free meter configuration tool based on the workflow common to a utility meter shop.

Provides fast, step-by-step meter configuration, presenting only the parameters most likely to need adjustment.

- Offers template-based programming that allows cloning of configurations across multiple meters.
- Features remote and off-line programming modes.
- Performs meter firmware upgrades.
- Includes complete meter diagnostics.





"The 2007 award recognises Schneider Electric for its technological advancements and wide product range in the field of power quality (PQ) and energy management solutions. In total, this is the fourth award that Schneider Electric and [recently acquired] Power Measurement have received from Frost & Sullivan in recognition of achievements in this arena."  
*Prithvi Raj, Frost & Sullivan research analyst*



## Enhance your PowerLogic solution

Support or expand your PowerLogic solution with matched accessories and complementary products or systems. Integrate with other Schneider Electric or third-party products through industry-standard protocol support.

### PowerLogic EGX series Ethernet gateways

Access devices on downstream serial networks through fast *Transparent Ready™* Ethernet communications featuring customised web pages.

### PowerLogic ION7550, RTU option

Remote terminal unit for transducer and equipment monitoring.

### T1 current transformers

Ratio of Ip/5 for use with measurement devices, relays, etc.

### Sepam™ protective relays

Monitoring, protection and control of substations, busbars, transformers, motors, generators and capacitors.

### Masterpact™ breakers

Equipped with Micrologic™ control units, offering protection for LV networks.

### Modicon™ programmable logic controllers

Small-scale distributed control to robust, powerful stand-alone PLCs.

### Talus™ substation control units

Telecontrol, remote monitoring and automatic control of MV substations.

### Power factor correction and harmonic filtering

Complete solutions including Varplus<sup>2</sup>™ capacitors, Varlogic™ controllers, detuned reactors, Varpact™ modules, Varset™ cubicles, Accusine™ filters and much more.

### PowerLogic ME series panel meters

Class 1 accuracy kilowatt-hour panel meters for stand-alone applications.

## Services

Our extensive engineering and support services ensure you leverage the full capabilities of your PowerLogic solution and benefit from a low total cost of ownership. Our experts can help with system selection, project management, integration, custom reporting, documentation and training to meet your organisation's unique needs.

Please contact your local sales representative for ordering information.

Visit [www.powerlogic.com](http://www.powerlogic.com) for more information on PowerLogic products, applications and system solutions.

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