



Toronto PLUG 2015

PM5000 & PM8000

John Straughn
Offer Management – Power Monitoring & Gateways

“The value you want, the benchmark metering accuracy you need”



PowerLogic PM5000 series

Cost-effective, accurate, and reliable power meters from the world leader in power metering

Partner benefits



Cost effectiveness since a single product (or product family) that can meet the majority of system requirements

Ease of setup thanks to the intuitive menu navigation on the graphical display, including phasor wiring validation, and onboard web pages

Ease of integration into larger systems and solutions with dual Ethernet and proper protocols, thus saving time (and money)

And end user benefits

Ease of use with intuitive menu-driven navigation and support for 8 different languages

Precision metering/billing thanks to energy metering compliance to IEC 61052/53 ranging from 0.5S to 0.2S

Billing flexibility with support for up to 8 different tariffs to suite your customers' particular needs

Consistent, superior performance with compliance to international metering standard IEC 61557



PM5000 – Offer Structure

PM5100

- Basic metering with class 0.5S accuracy + pulse output &/or serial comm

PM5300

- Basic metering with class 0.5S accuracy + 2DI/2DO + data logging + multi tariff + Ethernet or serial comms + 2 relay(form A)

PM5500

- Basic metering with class 0.2S accuracy + 4DI/2DO + data logging + multi tariff + Ethernet and serial comms + 4th CT input for neutral & ground measurement + Internal web server



PM5500 Remote Display



PM5563RD

Remote Display eliminates the need for PTs in installations above 120V when a display is needed on the panel door. Compliant with country regulations.

PM5560 + PM5563 Gateway

Connect via Ethernet to devices on the PM556x serial port

Get the important information directly from the serially connected meters

Cost effective for small to medium sized systems.

Receive alerts straight from the meter via e-mail , text message and SNMP traps



PowerLogic™ PM8000 Power Meter

“Simplifying power quality, maximizing versatility”

Measure, understand, and act upon insightful data gathered from your power system



PM8000 Power Meter

Reveal and understand complex power quality conditions

- > EN 50160 reporting and evaluation with internal web pages
- > IEC 61000-4-30 Class S compliance
- > Waveform capture, sag-swell and disturbance direction detection

Gather and act on facility-wide energy and consumption data

- > IEC 62053-22/24 Class 0.2S active, Class 1S reactive, WAGES
- > Dual Ethernet, RS485, gateway, Modbus, DNP3 and IEC 61850
- > Seamless integration in PME and PSE

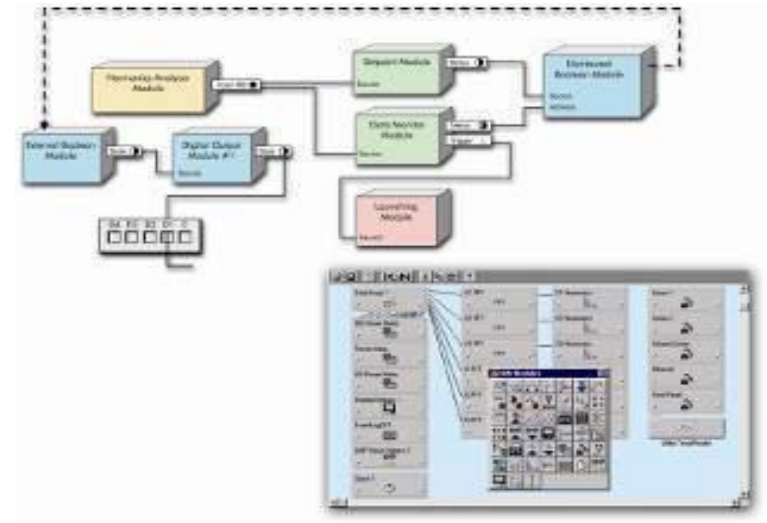
Protect your investment

- > Highly adaptable with ION™ technology
- > Modular IO options and multiple form factors

ION technology

Modular, powerful, flexible . . .

- Leverage the power and flexibility of **ION technology** for extensive customization.
- Uses simple “building block” approach.
- Uniquely addresses advanced monitoring and control applications.
- Adapts to changing needs, avoiding obsolescence.



Data server & gateway

Ethernet gateway

Modbus Master

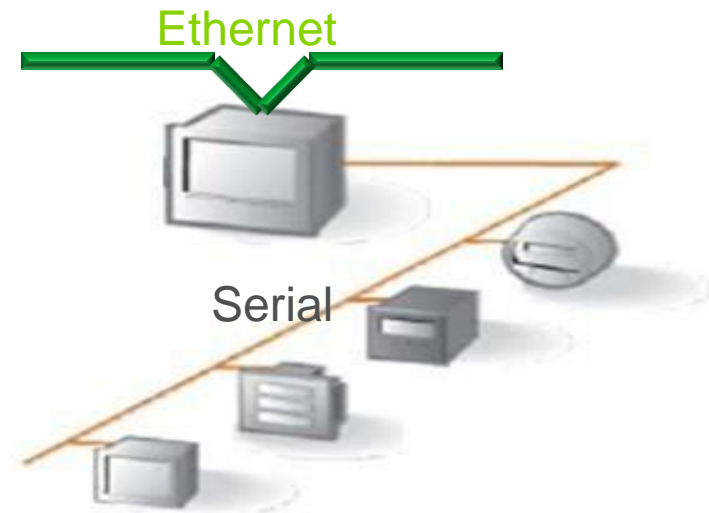
Factory defined and Customizable web pages

E-mail historical data and alarm notification

Multiple protocols

- Modbus, IEC 61850, DNP3
- HTTP, SNMP, FTP, SMTP, NTP, RSTP
- COMTRADE format for waveforms

Dual Ethernet ports allow daisy-chaining to simplify installation and RSTP enables self-healing connections. Ethernet supports multiple concurrent protocols.



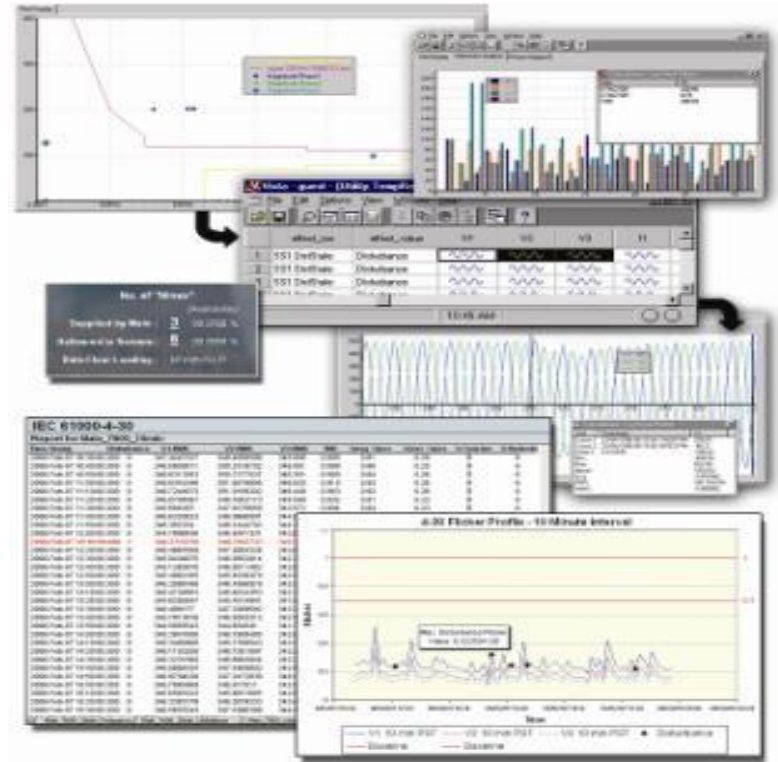
Revenue grade metering with power quality

Energy Accuracy

- > IEC 62053-22 Class 0.2S - Active
- > IEC 62053-24 Class 0.5S - Reactive
- > Revenue security

Power Quality

- > IEC 61000-4-30 Class S
- > IEC 61557-12 / IEC 62586
- > EN50160
- > 4 current inputs
- > Disturbance direction detection



PM8000 Disturbance Direction Detection

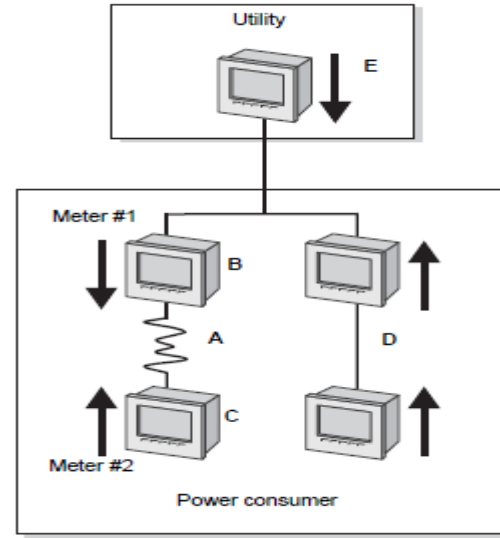
Disturbance direction detection helps determine the location of a power system disturbance.

Meter analyzes the disturbance information to determine the direction of the disturbance relative to the meter.

Analysis includes a confidence level indicating the level of certainty that the disturbance is in the determined direction.

Disturbance direction detection is enabled on meter by default.

The results of the disturbance direction detection algorithm appear in the meter's event log.



- A. Disturbance location
- B. Meter #1 reports downstream disturbance
- C. Meter #2 reports upstream disturbance
- D. Meters report upstream disturbance
- E. Meter reports downstream disturbance

PM8000

Setpoint Learning

Detect disturbances or values that are outside of a defined acceptable range.

Your meter can learn these values by monitoring normal operating values to determine what constitutes a voltage sag or swell in order to help identify high and low setpoints.

Setpoint learning can be used to identify the following values:

Feature	Values
Setpoints (Alarms)	High limit Low limit Sustain until ON Sustain until OFF
Sag	Voltage sag limit
Swell	Voltage swell limit

PM8000 - Offer structure

A complete refresh of the Intermediate metering range with new product family:

PM8240

- Class 0.2S meter, Ethernet, ION frameworks, Extensive Load profile, extendable IO, Power quality features **with Integrated display**

PM8243

- Class 0.2S meter, Ethernet, ION frameworks, Extensive Load profile, extendable IO, Power quality features, DIN rail, **with no display**

PM89RD96

- Color remote display

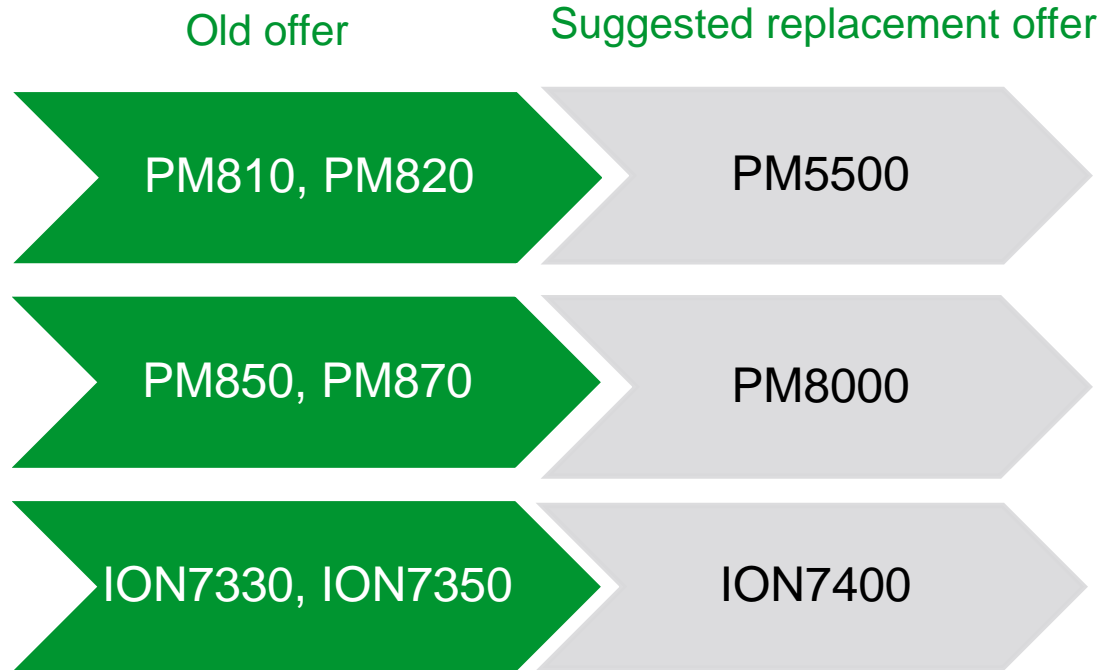
PM8244

- **Transducer meter + remote display** combined in one package

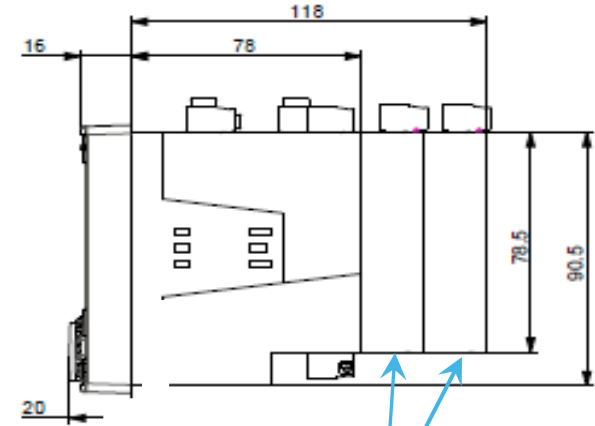
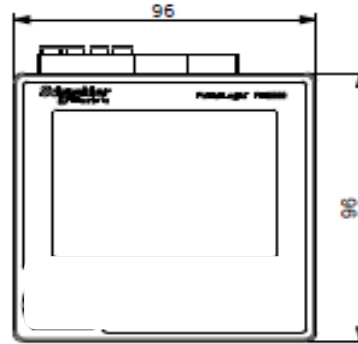
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Product Transition

New offer will replace all PM8 and ION73xx references

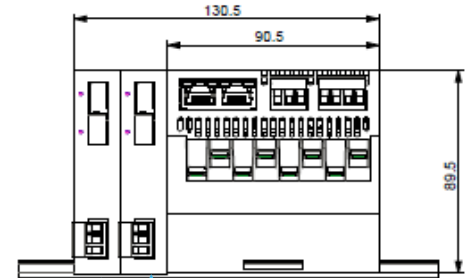
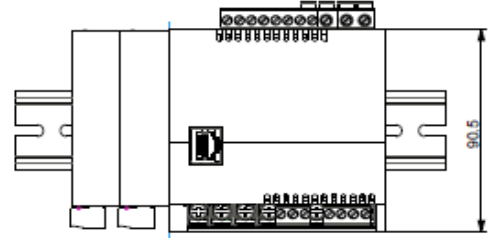


Panel Mount Meter



NOTE: Dimensions include two option modules.

DIN Rail Mount Meter



NOTE: Dimensions include two option modules.

Feature summary

Basic

690 V IEC / 600 V UL

Multiple language

Color integrated & remote display models

96 x 96 Form Factor

Modular I/O options:
- 6 Digital in (wetted) / 2 Relay out
- 4 Analog in and 2 Analog out

Cost Management

TOU - 20 year schedule

WAGES metering

Time sync (msec)

Revenue security

Base I/O (3 in / 1 out)

512MB memory
(10MB for Frameworks)

Class 0.2S accuracy

Network Management

EN50160 Analysis

IEC 61000-4-30 Class S

Sag / swell waveform capture

256 samples / cycle

Disturbance Direction Detection

Harmonics thru 63rd

Trending & Forecasting

ION™ technology

Cycle by Cycle RMS

Sequence of Event (IRIG-B)

4 Current Inputs

Connectivity

MODBUS, DNP3 and IEC61850

Dual port Ethernet

Gateway

Custom Web Interface

SNMP with Traps

E-mail historical data

Modbus mastering

E-mail notification

Questions?

