

Utility Metering

Update

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Life Is On

Schneider
Electric

Our Utility Customers' Voice

...must have
regulatory
compliance



...manage
easily change
of application



...get the most
accurate,
auditable
measurement



...support
multiple comms
concurrently



...need long
term warranty
and support



...maximize my
up time and
stability



Life Is On

Schneider
Electric

Utility Metering

5 unique benefits

24/7 Power Quality Analysis

Most Accurate Revenue Meter in the Market

Cyber Security Ready

Compliance Reporting with Class A devices

Modular, Flexible and Adaptable

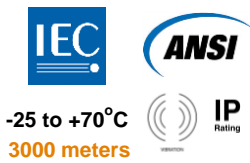
Monitor power availability and reliability, Identify root cause, (DDD) Disturbance Direction Detection

Class 0.1 accuracy and extended mission profile

Strong passwords, Secure protocols, Security log, but support concurrent comms

EN50160 & IEEE519 compliance reporting with EcoStruxure Power Management verify contractual performance commitments

Programmable, modular, field installable options



Schneider Electric Canada Meter Range

Cost Performance
Network Performance
Asset Performance

Functionality



Retrofit	Multi-Circuit	Basic	Intermediate	Advanced / Utility
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- Simple energy and power measurement
- Sub metering for cost allocation and analysis

- Compact power measurement with revenue-grade accuracy*
- Sub metering for multi-user environments

- High-end cost management, simple network management
- Sub metering and feeders

- Network management and power quality
- Critical loads

- Advanced Power Quality event detection
- Feeders, mains and critical loads

Utility Metering

Grid Power Quality and Revenue Metering



Power availability and reliability

Ensure that the quality of power delivered to sensitive loads (data centers, continuous process industries, semi-conductor fabs) is adequate and not contributing to nuisance tripping. Regulator requires compliance reporting.



Revenue Billing

Highly accurate meters with support for multiple time of use rates, and loss compensation on board minimizes disputes and maximizing revenue.



Generation

Smart functions in the meter such as transformer Loss compensation and power quality monitoring ensure accurate measurement of generated power put on the grid



Demand management & response

Accurate understanding of the loading on the grid allows more dynamic supply and demand balancing. 24/7 power quality analysis and smart functions such as DDD assists in identifying direction of disturbances minimizing unplanned downtime.



Large Industry

Large industry: MMM, Oil & Gas requiring management of multiple energy sources (generators, renewables, utility); validation of energy costs and redistribution in facilities as well a power quality.

Utility Metering Current

> ION8650 V421 Released & MC Approved

> Continued evolution on Cell Modem

- Support roaming and modem reset
- Modem activation via IONSetup

> Data Recorder module has changed

- If the Insert Outage Records register is set YES-ZERO FILL ENABLED the LogMode register must be set to HIGH SPEED CONTINUOUS or else the module will remain offline.
- NOTE: custom frameworks, if need to be updated

> Comms overload mitigation

- Issue in task security table when concurrent requests in a rapid pace would cause comms to lock up because no new comms task could be created



Utility Metering New

> ION8650 V422 – End October 2017

- > ION8650: Outage Notification - SCADA Integration
 - JSON message sent out to outage Software (PrimeRead etc)
 - Configurable for up to 2 mins

> ION8650 V4.25 - Q1 2018

- > 3G/4G comm card – IP addressable cell modem
- > Verizon or AT&T – SIM card support

> Power Quality Refresh ION8650 V4.30 – End Q2 2018

- > IEC61000-4-30 Ed3
 - Includes a new compliance certificate from SGS
- > PQDIF formatted export direct from the meter



Utility Metering

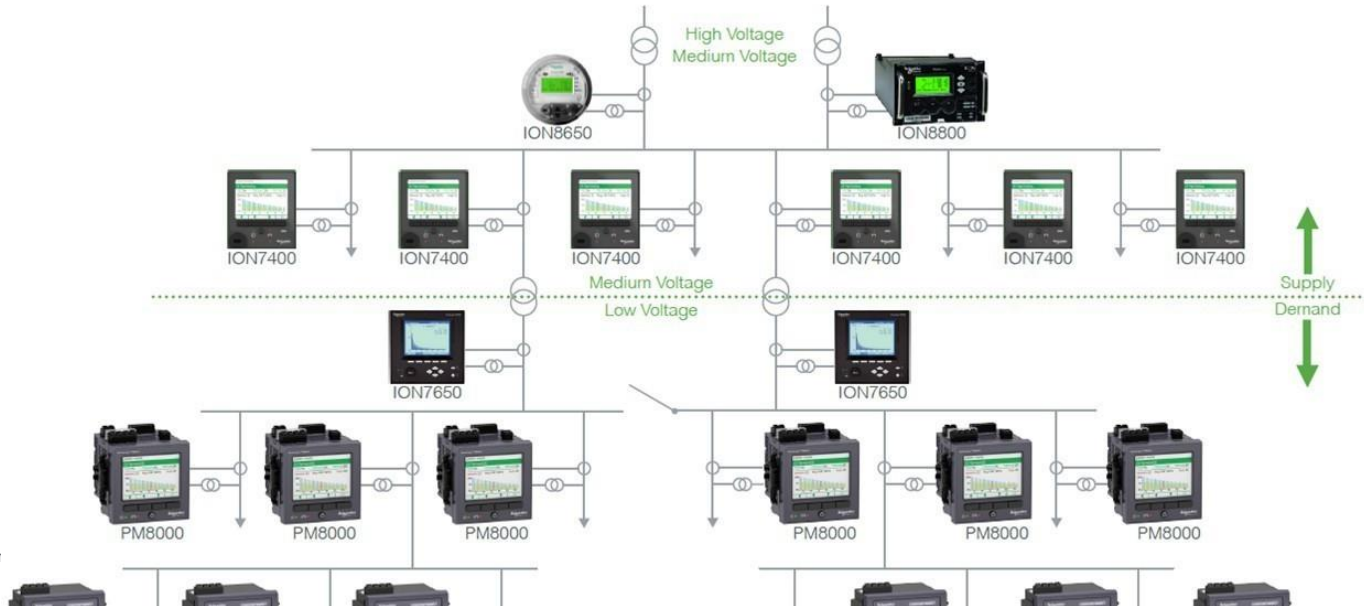
Utility Feeder Metering (UFM) and Power Quality Monitoring

NEW



ION7400 - the Correct meter in the Right place

- IEC62053-22 class 0,2S accuracy and IEC61000-4-30 Ed2, Class S
- panel (surface) mount form factor



Utility Metering

Utility Feeder Metering (UFM) and Power Quality Monitoring



Critical asset management

Monitor assets such as transformers for life cycle maintenance minimizing unexpected downtime.



Root cause analysis

Feeder head, middle and end of line monitoring and utilize DDD to detect direction of the disturbance. Capture power change over events



Demand Response

Enable demand response programs. Identify inefficiencies by using power quality data; develop strategic load shedding applications using smart functions.



Demand management

Monitor real-time value (Volts, Amps, kW) to ensure generation matches demand and that lines will not be overloaded



Smart equipment

Fully digitize assets buy using smart functions in the meter. Provide opportunities for network management and increase operational efficiency

ION7400 Utility Feeder Meter

Compact, 3-phase, multifunction energy and power quality compliance meters ideally suited for utility feeder applications

NEW



Applications

- Maximize profits by providing the highest output possible with the least amount of risk to availability
- Optimize availability and reliability of electrical systems and equipment
- Monitor power quality (PQ) for compliance and to prevent problems
- Meters fully supported by StruxureWare Power Monitoring Expert and PowerSCADA Expert Software

Current shipping firmware V1.2.14
currently Released and MC Approved

Features

- Class 0.2S accuracy
- Monitors and logs parameters in support of international Power Quality standards
- 50+ definable alarms to log critical event data.
- Multiple simultaneously operating communication ports and protocols
- ION™ frameworks allow customizable, scalable applications, object-oriented programming,
- GPS clock (RS485) or IRIG-B (digital input) to +/- 1 millisecond
- Advanced security: Up to 16 configurable user accounts

ION7400 Utility Feeder Meter – offer structure

Compact, 3-phase, multifunction energy and power quality compliance meters ideally suited for utility feeder applications

NEW



ION7400

- Class 0.2S meter, dual Ethernet, ION technology, extendable IO, Power quality features, panel mount **with Integrated display** (optical port, energy pulse LEDs, USB)

ION7403

- Class 0.2S meter, dual Ethernet, load profile, ION technology, extendable IO, Power quality features, DIN rail mount **with no display**

PM89RD96

- **Colour** remote display

PM89M2600

- Field installable I/O module with 6 self-wetted digital inputs and 2 Form-C relay outputs

PM89M0024

- Field installable I/O module with 4 analogue inputs and 2 analogue outputs

New Firmware V1.4

Firmware (Q4 2017)

- IPv6
- DHCP for IPv4 & IPv6
- Cyber Security enhancements
- Waveform viewing in web page
- Remove 10MB logging limit
- DLMS protocol – ION7400 only

Other (Q4 2017)

- Modbus product ID
- Real-time clock temperature compensation
- Time quality flag for GPS input

Hardware (Q1 2018)

- Extend standard DC control power (110Vdc)
- Low voltage control power (24-60Vdc) option



Thank You



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