PowerLogic ION update

PM8000 + ION9000

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Life Is On Schneider Electric

Introduction

Advanced Metering Applications

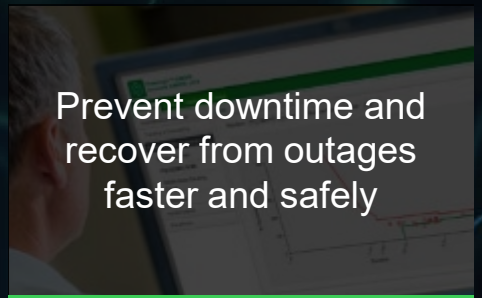
The electrical grid is going through fast transformation

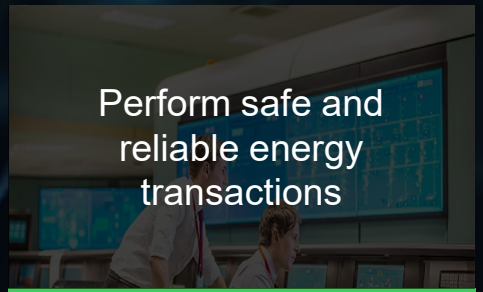
Distributed generation, renewables, electrical vehicles and power electronics are changing the grid characteristics – creating challenges for those who rely on power availability for business continuity.

Increased numbers of players are participating in the energy market

Energy trading transactions are getting more complex, with growing concerns in data accuracy and cybersecurity.

Advanced meters help end users:





True Reliability

Customer expectation

Our customers trust in our device's data to make critical financial and operational decisions. That data needs to be accurate and reliable under any circumstances.

Our promise

It's our mission to ensure our devices have superior accuracy for both energy and PQ monitoring and comply with the latest relevant international standards.

Tangible Results

Customer expectation

Our customers need our devices to provide actionable and easy to understand power quality information. Information that will lead to tangible results, i.e. decreasing downtime.

Our promise

It's our mission to de-mystify complex PQ phenomena and provide easy and actionable information to our customers.

Wide Versatility

Customer expectation

Power systems and regulations are constantly evolving, our customers need flexible PQ monitors that can easily adapt to the new electrical world.

Our promise

It's our mission to develop an offer that is flexible and can meet the evolving needs of different businesses in different contexts.

True Reliability

1 - True Reliability

World's Most Accurate Meter

> Full compliance to the latest edition of international accuracy standards with 3rd party certification:

Growth of non-linear loads and renewable power generation → Distorted waveform and various PQ phenomena → Need to regularly reevaluate and revise standards for power meters design → Compliance to latest standards is an assurance of quality and performance

Schneider Electric's Advanced Meters comply with the latest edition of the international accuracy and power quality standards, all backed up by 3rd party test reports:

- For revenue billing/energy monitoring applications: IEC62052-11 ed.2 and ANSI C12:20 2015
- For PQ monitoring applications: IEC61000-4-30 / IEC62586-1 / IEC62586-2

PQI-A

1 - True Reliability

How we deliver our promise

> Cybersecurity

Schneider Electric is committed to being a cybersecurity leader on the internet of things. Even though international cybersecurity standards are in their infancy, Schneider is taking a leadership position by ensuring that all our new connected products conform to IEC 62443.

A few examples of cybersecurity features available today on Advanced Metering devices are:

- User-based access control
- Digital signature
- Restricted use of unnecessary functions (ability to enable / disable physical comm ports, TCP ports)
- Audit logging (embeds information on which user made any change, can push to Syslog server)
- Secure protocol support (HTTPS, SFTP, SSH terminal)
- Protocol lockout
- Secure password storage

Tangible Results

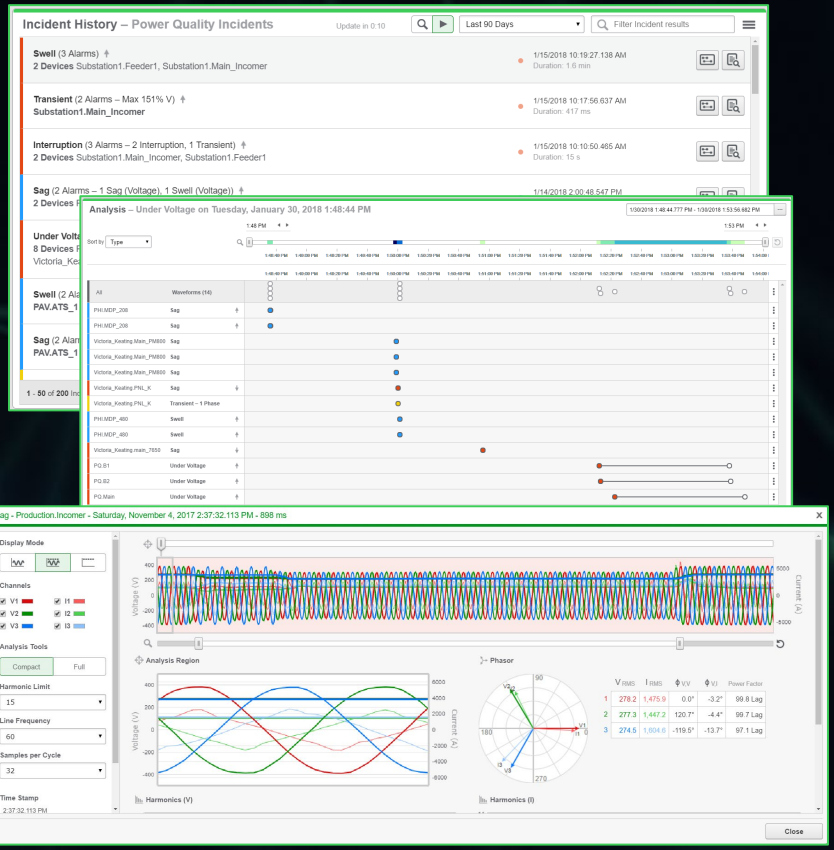
2 - Tangible Results

Meaningful PQ Analysis

> Smart power event analysis

- *“I need to quickly see the impact of incidents that affect my facility. I have too many alarms to understand what is really going on. I don’t want to be distracted by irrelevant information when I am trying to restore operations”*

- Faster incident analysis by automatic grouping of related alarms.
- Make faster decisions, with key alarm information - such as disturbance direction - available at a glance
- Ensure important information is not lost in a flood of data with intuitive and powerful alarm filtering, searching, and categorization.
- See what you’ve missed with alarm counters



Connected Devices + **Time Synchronization** + **Smart Alarms, Timeline and waveform analysis**

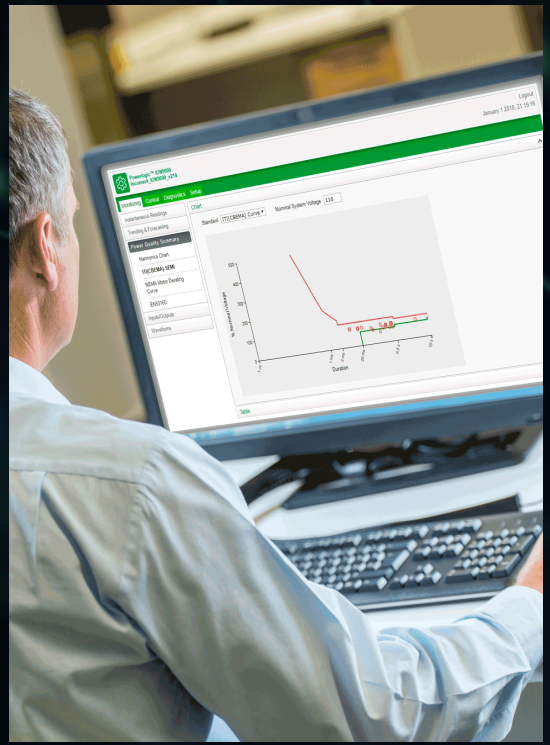
2 - Tangible Results

How do we deliver our promise

> PQ compliance reports:

Schneider Electric's advanced metering offers measure, store and report data in accordance with the most relevant international standards, such as IEEE519 and EN50160:

Easy to read pass / fail analysis on the meter webpage allows users to quickly understand if their system is compliant with these standards. Full compliance report available with PME.



Wide Versatility

3 - Wide Versatility

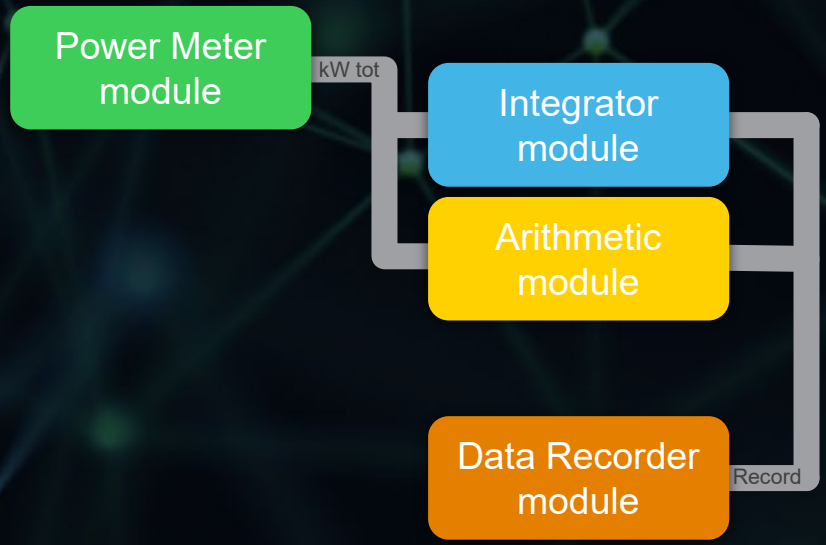
How do we deliver our promise

> ION programmability:

ION programmability is a visual “block style” programming language that allows users to customize advanced meters to their particular business needs.

The ION architecture makes Schneider Electric’s advanced meters truly future-proof. The user-programmable ION frameworks mean that an ION meter can be tailored to local power quality and energy metering standards without requiring custom firmware.

Competition often relies in custom firmware designed for different standards or different regions which can quickly lead to an “orphaned” installed base that can no longer be upgraded with the main firmware thread. ION frameworks eliminate this concern and, once again, making the meters future-proof.



3 - Wide Versatility

How do we deliver our promise

> Hardware modularity:

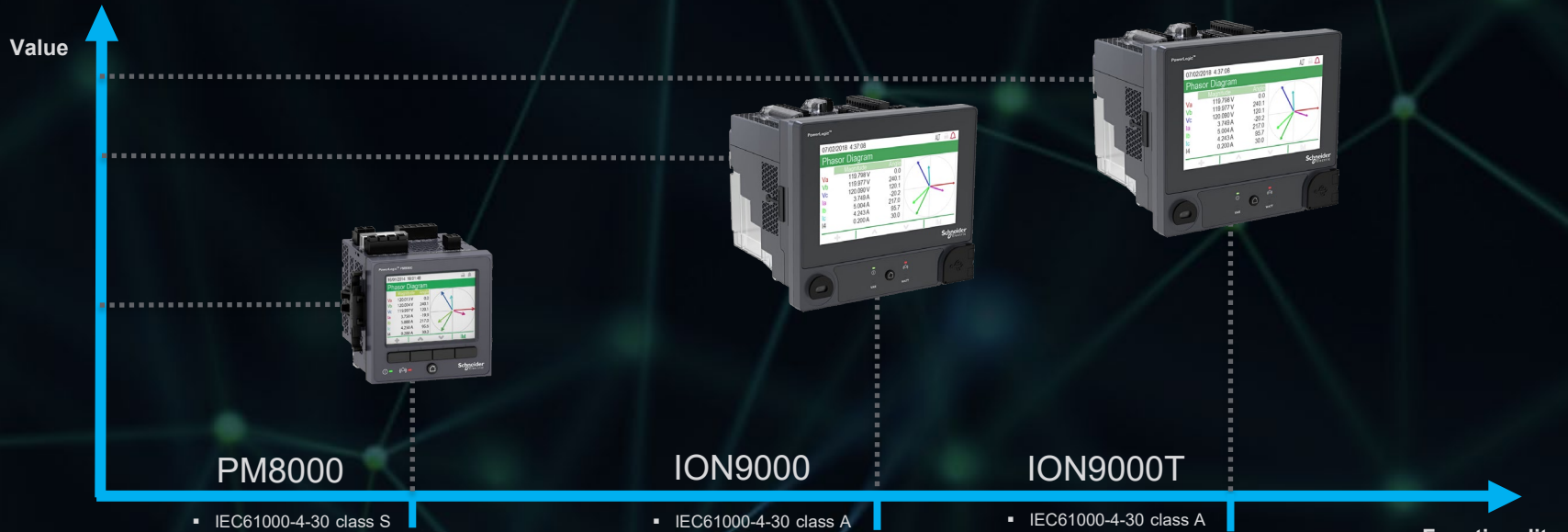
Schneider Electric’s advanced metering offers are designed to be flexible and adapt to the ever-changing business conditions our customers are facing. The modular architecture allows for field upgrade of key capabilities, such as the number of I/O modules, additional comm ports, different display and mounting options.

This flexibility allows our customers to expand their device’s capabilities as their system grows bigger and complex, without the need to replace the installed base.

Offer updates

Product Specs

PM8000 vs ION9000 vs ION9000T



- IEC61000-4-30 class S
- Class 0.2 accuracy
- 512 MB memory
- Color display
- 256 samples per cycle
- Sag / Swell, THD, individual harmonics, extended waveform capture, DDD

- IEC61000-4-30 class A
- Class 0.1 accuracy
- 2GB memory
- Color and touch display
- 1024 samples per cycle
- Sag / Swell, , THD, individual harmonics, extended waveform capture, DDD, Flicker and Transients

- IEC61000-4-30 class A
- Class 0.1 accuracy
- 2GB memory
- Color and touch display
- 10MHZ sampling rate
- Sag / Swell, THD, individual harmonics, extended waveform capture, DDD, Flicker and high-speed Transients

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