

# PowerLogic™ ION8700

## Grid Monitoring. Perfected.



Electrification, renewable integration, and AI-driven operations are driving the need for higher accuracy, deeper power quality visibility, and richer real-time data. At the same time, aging infrastructure and rising cybersecurity risks demand a more secure, modern approach to grid monitoring.

### PowerLogic™ ION8700 helps maintain reliability amid increasing grid volatility:

- Revenue-grade accuracy for critical metering
- PQI Class A power quality analysis
- Advanced cybersecurity for connected grids
- Real-time insight to detect and analyze events early

### Built for evolving grid architectures

With flexible programmability, modular I/O, and seamless integration with Power Monitoring software, operators have a clearer view of network performance. Dual independent Ethernet ports support isolated access from two separate networks for secure operations and maintenance, while adaptable hardware allows easy expansion as loads, renewables, and operational requirements evolve.

### Benefits at a glance

- **Protect revenue**  
with Class 0.1S energy accuracy
- **Improve reliability**  
with PQI Class A PQ analysis
- **Diagnose issues faster**  
using smart event analysis
- **Reduce outage risk**  
with early detection of disturbances
- **Strengthen security**  
with advanced cybersecurity
- **Adapt easily**  
with modular I/O and ION programmability
- **Scale for future grids**  
as loads, renewables, and network complexity grow
- **Integrate seamlessly**  
with Power Monitoring software

# Engineered for reliable, secure grid intelligence

PowerLogic ION8700 is engineered to elevate energy accuracy, strengthen power reliability, and bring modern cybersecurity to critical electrical systems. Built on the trusted ION architecture, it delivers the intelligence, adaptability, and security today's energy-intensive operations require.

## True reliability

### Accurate • Secure • Safe

Protect revenue, equipment, and system performance with metering you can trust in every operating condition:

- ANSI Class 0.1S energy accuracy ensures precise billing, reporting, and financial reconciliation
- PQI-Class A compliance validates power quality performance with industry-recognized rigor
- Advanced cybersecurity safeguards operations against modern threats, helping maintain confidence in connected environments

## Tangible results

### Intelligent • Actionable • Compliant

Help prevent downtime, diagnose issues faster, and maintain grid-level reliability:

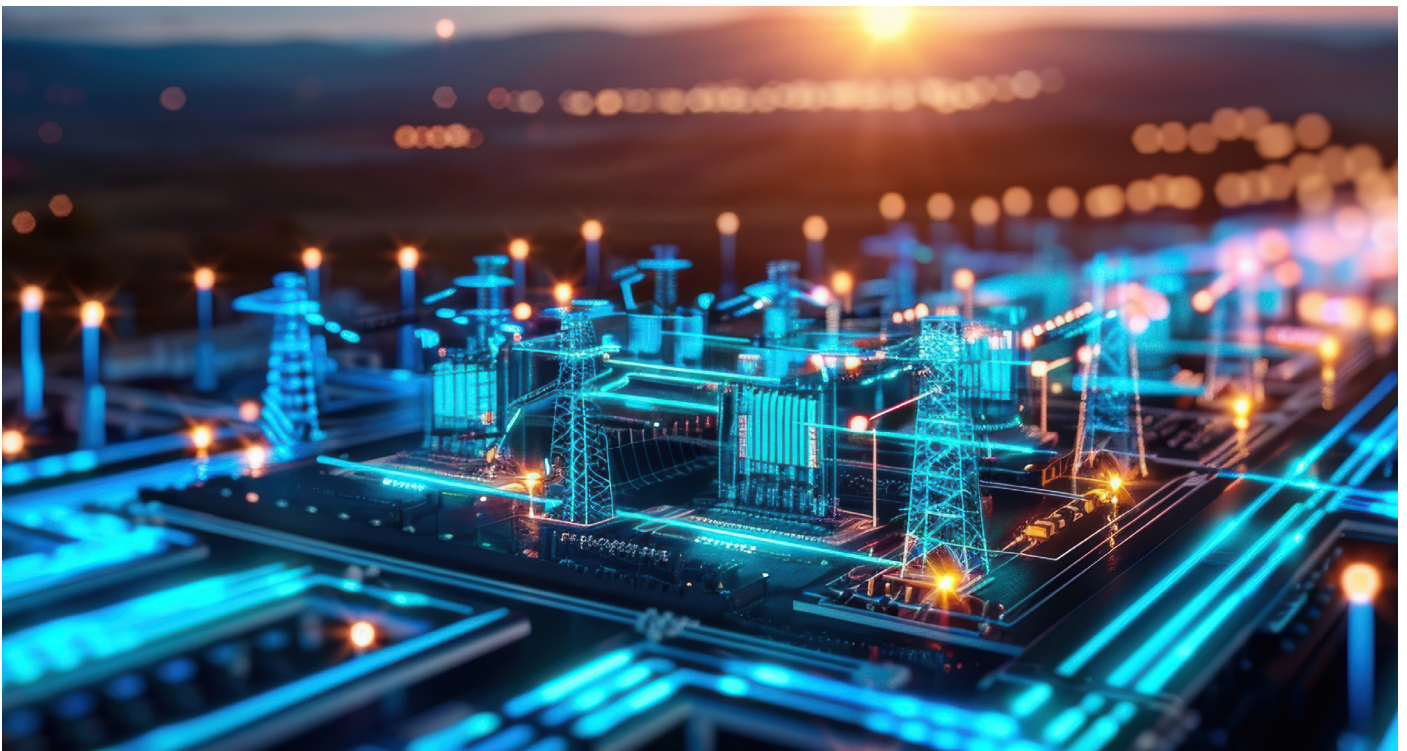
- PQ-compliant reporting for consistent, audit-ready documentation
- Smart event analysis accelerates root-cause discovery and trend visibility
- Seamless integration with power monitoring software, and features such as Disturbance Direction Detection, unifies operational views, enhances decision-making

## Wide versatility

### Functional • Programmable • Customizable

Adapt to your application, not the other way around:

- Full ION programmability supports advanced customization and control
- Modular hardware options including I/O expansion and multiple form factors
- Dual independent Ethernet + 3.5" colour display provide flexible communication and user-friendly interaction



# Models and technical specifications

Features	ION8700A	ION8700B	ION8700C
Energy accuracy class	Class 0.1S Active / Class 0.5S Reactive / Class 0.1 ANSI		
Sampling rate	1024 samples per cycle		
Waveform sampling rate	1024 s/c	256 s/c	128 s/c
Logging memory	2GB	1GB	512MB
Logging	100 DRE (5000 channels)	50 DRE (2500 channels)	10 DRE (500 channels)
Communication ports	2 x independent Ethernet ports; 1 × RS-232 / RS-485; 1 × RS-485; Optical port; 1 x Ethernet for I/O expansion Optional: Cell modem; Fiber modem		
Communication protocols	Secure ION, Modbus RTU and TCP, IEC61850, DNP3, DLMS, SNMP, DPWS, HTTPs, with support over IPv4 and IPv6		
Time synchronization	PTP, GPS, IRIG-B, NTP / SNTP		
I/O	Onboard I/O: 3 x digital or analog inputs, 5 x digital or analog outputs Optional: 4 Form C DO, 1 Form A DO, 3 Form A DI; Outage notification		
Expansion I/O modules	6 DI, 2 RO, or 2 AO / 4 AI (up to 4 modules can work simultaneously)		
PQ measurements	THD, individual harmonics (63), sag / swell, waveform capture, DDD, extended waveform recording, flicker, transients	THD, individual harmonics (63), sag / swell, waveform capture, DDD, flicker	THD, individual harmonics (31), sag / swell, waveform capture, DDD
PQ compliance	PQI-Class A	Class S	No PQ
Hardware lock	Yes		
Cybersecurity	Secure protocol support (HTTPs, SFTP, SSH); role-based access control; complex long passwords (64 characters); ability to enable/disable physical communication ports; audit logging; secure password storage; digitally signed firmware; secure boot		

## EcoStruxure-ready open architecture, ready to connect



### EcoStruxure Power Monitoring Expert

EcoStruxure Power Monitoring Expert is the Power monitoring software for reliable electrical networks. Purpose-built to help power-critical and energy-intensive facilities maximize uptime and operational efficiency, this power monitoring software is the window into your digitized power network, leveraging IoT connectivity and distributed intelligence.



### EcoStruxure Power Operation

Power management and control software is an advanced, cybersecure power management software platform engineered for electro-intensive and mission-critical facilities that require secure and dedicated power automation, power monitoring, and power events analysis. Leveraging ETAP\*\*'s proven digital twin foundation, EcoStruxure Power Operation offers real-time predictive simulation and operator training simulation capabilities.

[\*\*Electrical Power System Analysis Software]

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