



FCAS Conformance Monitoring with the Qualitrol IDM+

Proven, High-Precision Measurement for the Evolving NEM



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FCAS providers in Australia's National Electricity Market (NEM) must demonstrate strict conformance to AEMO's Market Ancillary Services Specification (MASS) to participate and avoid penalties.

With the introduction of **Very Fast Frequency Response (1-second services)** and tightening performance requirements, accurate, high-speed measurement is now critical.

The **Qualitrol IDM+**, delivered and supported by Insulect, provides a proven, high-precision platform for capturing, validating and retaining FCAS conformance data across all service types.

FCAS in Today's NEM

- 10 FCAS markets now active, including:
 - Very Fast (1s): R1 / L1
 - Fast (6s): R6 / L6
 - Slow (60s): R60 / L60
 - Delayed (5 min): R5 / L5
 - Regulation (continuous)
- For many contingency FCAS services, AEMO's MASS requires local frequency and power measurements at intervals of 50 ms or faster (≥ 20 Hz), with slower intervals permitted for some other services

The Measurement Challenge

To remain compliant, generators must:

- Capture high-resolution data during frequency events
- Prove response performance against AEMO thresholds
- Retain auditable records for verification
- Avoid penalties if data is unavailable or inaccurate



The Solution: Qualitrol IDM+

A high-performance, multifunction monitoring platform engineered to exceed FCAS conformance requirements.

Exceptional Accuracy

- Power uncertainty < 0.04% (vs 2% requirement)
- Frequency uncertainty significantly exceeds MASS requirements

High-Speed Sampling

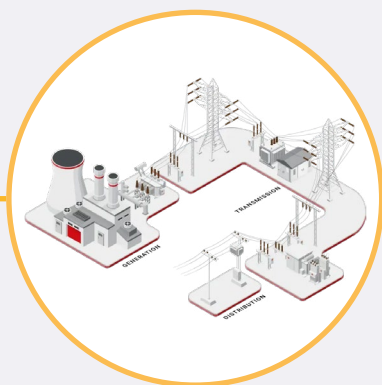
- Configurable up to 100 Hz (well above 20 Hz minimum)
- Captures full 1-second and 6-second FCAS responses with precision

Reliable Event Capture

- Automatic detection and recording of frequency disturbances
- High-fidelity, time-synchronised data across MW, MVA, Hz, V, A

Compliance Confidence

- Proven capability across all 10 FCAS markets
- Generates auditable, defensible conformance data



Why Choose Qualitrol IDM+

Exceeds MASS Requirements

Designed and tested to go well beyond minimum compliance thresholds — providing confidence under tightening standards.

High-Resolution Diagnostics

- Transient recording up to 25.60 kHz
- Enables deep analysis of grid events beyond compliance needs

Future-Ready Platform

- Built for evolving FCAS markets (including Very Fast services)
- Avoids obsolescence as standards tighten



More Than FCAS Monitoring

The IDM+ is a multifunction monitoring platform, enabling:

- Power Quality Monitoring (Class A capable)
- Communications support (Modbus, DNP3, IEC 61850, TCP)
- Digital Fault Recording (DFR)
- Dynamic Disturbance Recording (DDR)
- Phasor Measurement

Replace multiple devices with a single integrated platform



Reduced Risk for Asset Owners

- Ensures data is available when AEMO requests it
- Supports audit-ready reporting and verification
- Minimises exposure to non-conformance penalties

Delivered by Insulect

Insulect provides full lifecycle support:

- System design and integration tailored to your network
- Commissioning and configuration with two years support included
- Local engineering support with fast response times
- Maintenance, upgrades and training to keep systems compliant

Trusted by



Speak to our team about FCAS compliance for your site

- [Book a technical discussion >](#)
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