

Advanced Generator Protection System

A paradigm shift in the way power plants operate and are protected, raising the industry standard from 20 to 350 years mean time between failure.



Power when
you need it.



The AGP system coordinates multiple sub-systems in a unique architecture that is founded on fault tolerance. By monitoring the various generator incomers, tie breakers, and overall power distribution, the AGP can predict vessel events to prevent or minimize their effects.

The AGP system, coupled with AKA's medium voltage distribution designs, allow for the multiple buses to operate in a closed ring configuration that is conducive to:

- DP3 operations;
- Generator load sharing for high efficiency operation; and
- High fault tolerance that prevents or reduces major vessel events resulting in significant downtime.

By combining elements such as AGP, generator incomers, tie breakers, and transformer feeder controls backed by pre-magnetization distribution, AKA allows for secure and confident vessel operations in a closed bus DP3 environment.

The Advanced Generator Protection (AGP) system was developed jointly by AKA and Transocean, the world's largest offshore drilling contractor.

Why choose AGP?

A New Standard In Power Protection.

The AGP improves on typical protection systems through its ability to carry out the following protective actions:

- Detect a fault condition, or even a minor irregularity in generator performance and take pre-emptive action by raising an alarm or bring additional generators online.
- Identify the source of a fault and clear the fault prior to it affecting the rest of the plant by isolating it - tripping a breaker for example.
- Report detailed information on plant status and events (faults) through its Human Machine Interface (HMI) in real time and for historical events.

The abilities of the AGP exceed those of ordinary generator protection systems in several key areas like:

- Operate autonomously for each generator being monitored so that protection is never lost due to a single fault in the system.
- Reduce centralized control, with total independence of each diesel generator's continuous load sharing, "synchronization and soft load", and "unload and open" power management functions.
- Provides easy access to advanced fault and event logging functions through a user-friendly interface.
- Users can view historical system data or real-time graphical displays of system parameters, and export information for off-site analysis.

- Built-in on demand highspeed oscillography for testing, recording, and analysis.
- Designed with Built-to-Test philosophy for annual trials or other testing requirements.

Becoming the default power plant protection system on dynamically positioned drilling rigs.



 Deepwater Proteus

Ultra-Deepwater - DNV - Operational



 Deepsea Asgard

Semi-Rig - DNV - Operational



 Sedco 706

Semi - Rig - ABS - Operational



 Bhagwan Dryden

Dive Support Vessel - Lloyds - Operational



 Transocean Spitsbergen

Harsh Environment - DNV - Operational



 Deepwater Conqueror

Ultra-Deepwater - DNV - Operational

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