

Generator Control Panel (GCP)

Optimizing operations by integrating generator excitation, protection and synchronization



01 External view of standardized Generator Control Panel system cabinet. The design can be customized to accommodate customers' needs and requirements.

The GCP is a completely integrated system consisting of excitation, synchronization and protection, offered at a competitive price. GCP is equipped with market-leading ABB products to ensure high reliability, durability and optimized operation. The high level of modularity allows easy adaption to meet customer needs and requirements.

ABB's GCP helps customers increase reliability and reduce maintenance costs. ABB's expertise and state-of-the-art technology provide customers with the best solutions available in the market.

ABB's GCP system is equipped to:

- Handle the varying requirements of oil, gas and chemical assets, including small to large generators.
- Re-establish and reconfigure all links to 3rd-party systems, typical turbine control systems and overall plant control center.

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02 Internal view of standardized Generator Control Panel cabinet. The components and configurations can be customized to accommodate customers' needs and requirements.

ABB offers two basic solutions:

GCP System Retrofit

Includes replacement of the GCP cabinet, including new excitation, synchronization and protection system. This solution is based on customer's existing system.

GCP System Design

Uses modern technology to design a new operating philosophy of the system.

Both solutions include the following main components:

- ABB Nitrol 6080 (Excitation)
- ABB Synchrotact 5201/6201 (Automatic Synchronization)
- ABB Synchrotact 5100/6200 (Automatic and manual synchronizing check tool)
- ABB REG670/REX640 (Generator Protection)

Technical add-ons and customized options can be provided to meet customer's needs and requirements.

Why Choose ABB's GCP?

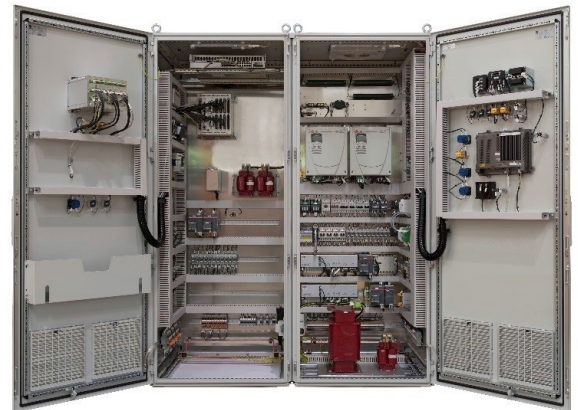
- Eliminate operating errors and provide improved protection
- Improve operating efficiency and plant reliability
- Extend plant life
- Increase functional safety with current/voltage supervision
- On-time delivery
- Simplify sourcing of spare parts
- Reduce upgrade, operation and maintenance costs
- Access to world-wide experts and commissioning through first-class support worldwide network
- Enhance monitoring possibilities for event analysis
- Well-known brand name with recognized quality
- Reduce project execution risk and deliver fast track project
- Possible to deliver fast track project

ABB's Role in Projects

ABB can be a sub-supplier or be the Main Electrical Vendor (MEV) for both greenfield and brownfield installations. As sub-supplier, ABB is responsible for GCP project delivery, and can offer installation supervision and commissioning assistance. As MEV, ABB is responsible for covering all phases of the project, from Front End Engineering Design (FEED) to operation.

Advantages with MEV delivery from ABB

- Overall responsibility
- Coordinated life-cycle solutions
- Reduced risks
- Fewer interfaces
- Easier communication structure
- Compliance with customer standards
- High degree of standardization
- Reduced project duration
- Reduced costs
- Optimized training



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References

ABB scope of delivery

Year	Project name	Owner/operator	GCP System Retrofit	CCP System Design	Unitrol 6080	Unitrol 1020	Synchrotact 5	Relion Protection Relay	Network Technical Addon	MEV Scope	Commissioning Scope	Installation Scope
2019	Oseberg A	Equinor	✓								✓	
2019	Troll C	Equinor	✓		✓		✓	✓			✓	
2018	Kvitebjørn	Equinor	✓		✓		✓	✓		✓	✓	✓
2018	Visund	Equinor	✓		✓		✓	✓			✓	
2018	Grane	Equinor	✓		✓		✓	✓			✓	
2018	Oseberg Øst	Equinor	✓		✓		✓	✓			✓	
2016	Troll B	Equinor	✓		✓		✓	✓	✓		✓	
2015	Åsgard A - Essential generators	Equinor		✓	✓		✓	✓	✓		✓	✓
2015	Åsgard A - Main Generators	Equinor		✓	✓		✓	✓	✓		✓	✓
2015	Snorre A	Equinor	✓		✓		✓				✓	
2014	Oseberg Sør	Equinor	✓		✓		✓	✓	✓	✓	✓	✓
2014	Kristin	Equinor	✓		✓		✓			✓	✓	✓
2014	Brage	Wintershall		✓	✓		✓	✓			✓	
2013	Sleipner A	Equinor		✓	✓		✓	✓			✓	
2013	Oseberg A	Equinor	✓		✓		✓	✓			✓	✓
2012	Oseberg B	Equinor	✓			✓					✓	
2011	Heidrun	Equinor	✓		✓		✓	✓			✓	✓



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