

Protection & control services

Products and services to meet your generation, transformer, transmission, and distribution relay needs

The need to retrofit relays in existing substations and power plants is becoming increasingly important due to the reliability threat posed by aging systems, and the need to reduce operating costs.

ABB is uniquely positioned to provide expert solutions to our customers, as we have direct access to design engineering at our manufacturing facilities. ABB will customize our offering to meet your unique requirements.

ABB can help

- Lower your costs
- Improve your reliability
- Provide technical expertise
- Upgrade your relays
- Reduce your downtime
- Increase safety

Turnkey services

- Engineering
- Design
- Documentation
- Project management
- Installation
- Commissioning
- Maintenance

Product offering

- System upgrades
- Retrofits
- Training
- Studies
- Relay panels
- Modular control buildings
- Software and hardware
- Automation



In-house services

ABB provides world-class products complemented by a full scope of services. In addition to its broad range of protection and control products and systems, ABB offers a comprehensive selection of services to help you understand and manage your power system behavior under diverse operational and disturbance situations.

With more than 100 years of experience in the protection and control of power systems worldwide, we can serve you with knowledge that enables you to reap the full benefits of your protection and control equipment investment. Our experts will support you at every step you take, from optimized building and correct installation of your power system, to its reliable operation.

Design engineering

Engineering finalizes design details and oversees the project from award through completion.

- Develop bill of material
- Provide design
- Project engineering
- Evaluation
- Coordination
- Review customer specifications
- Design reviews
- Project management

Design drafting and documentation

Our design drafters work closely with the Project Engineer to develop complete documentation packages. Documentation includes detailed relay panel layouts and assemblies, custom steel structures, control schematics, device development tables, point-to-point wiring diagrams, cable schedules, interface tables, nameplate charts, and wire label files.

Various CAD software packages are utilized to meet the customer's needs. Software tools are continually upgraded with the latest versions available.

CAD systems – file format capabilities:

- AutoCAD Electrical 2010 - .dwg/.dxf
- AutoCAD Raster Design 2010 - .dwg
- MicroStation V8I - .dgn
- SolidWorks 2007 - .sld

When applicable, AutoCAD Electrical is utilized to create “intelligent” schematics. Wiring diagrams are extracted from the schematic, thus reducing drafting time, eliminating drawing errors and providing accurate documentation used for panel wiring, testing, and final installation.

We strive for quality design, drawing accuracy, and total customer satisfaction.



Feeder, transformer, generator, and line protection



1 Cement plant before | 2 Cement plant after | 3 Thermal plant before | 4 Thermal plant after | 5 Hydro plant before | 6 Hydro plant after | 7 Geothermal plant before | 8 Geothermal plant after

On-site retrofits

Existing panels are modified and retrofitted at the customer’s location. ABB replaces obsolete relays with new microprocessor relays in the existing panels. In addition, we will provide the necessary engineering, documentation, relay settings, and commissioning to meet our customer’s needs.

System installation

Relay panels are installed and tested on-site by qualified ABB relay service personnel. Our field technicians and engineers average over 10 years experience with protective relays, communications monitoring, and control equipment.

Relay and system commissioning

Relays are tested at the customer’s site:

- Settings installed
- State-of-the-art test equipment
- Test reports

The installed relay system is fully tested:

- System functional test
- Trip checks
- In-service tests
- As installed drawings

Maintenance

Our service team will maintain all manufacturers’ relays and provide complete test reports and schedules.

- Electromechanical
 - Inspection
 - As Found test results
 - Calibration
 - As Left test results
- Solid State
 - Inspection
 - Check / record settings
 - Test results
- Microprocessor
 - Inspection
 - Check / record settings
 - Metering accuracy
 - Computerized test results
- Relay Assessment
 - Relay reliability
 - Maintenance
 - Repair & retrofit

Relay assessment program

Our relay assessment program provides an analysis for relay reliability and will identify maintenance, repair, and retrofit requirements. An ABB relay assessment can help to determine the health of your relay population.



Modular protection and control buildings



Additional services

Modular control building

ABB provides modular control building with protection, control and automation systems installed, fully tested and delivered to our customer's site. We provide a complete customized design, engineering and drawings per customer's specification.

In addition, ABB will commission and cut over the new control building equipment.

Technical training

One or multiple day technician training can be provided on specific relays as well as on the entire system. Applications, settings, acceptance tests, maintenance and test equipment setups are typically covered.

For more information about ABB services, please contact your sales representative or call one of the numbers listed below:

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