

ABB Ability™ System 800xA

Power Control Library

Digital application to monitor your industrial electrical system



Energy availability is key to keeping industrial processes running. Power outages lead to production losses, requiring fast and accurate actions to troubleshoot. Having the capability to monitor and control the electrical substations of industrial plants reduces the time to diagnose the root cause of the problem and increases the safety of personnel.

Enhancing the visibility of the substations

Industrial companies expect their substations will always be on and available, avoiding undesired stoppages of the process. To achieve that, industry needs solutions that recover the energy supply quickly and safely at minimum cost. The power automation delivered by the Power Control Library allows for full insight into the electrical system, enabling operators and maintenance teams to take faster and more accurate decisions after an electrical fault.

The ABB Ability™ System 800xA Power Control Library is a more intuitive system that provides quick information access to improve the plant supervision at the control room and connect digital substations from distant places into System 800xA. It enhances not only the visibility of the substations, but also improves safety for personnel by reducing the time spent in the field exposed to electrical danger.

Faster troubleshooting with an intuitive system

The Power Control Library creates a bridge between two of the most important parts of the plant: Automation and Electrification Systems. The library uses System 800xA as an Electrical Control System, creating a full-information environment at the control room to effectively control the entire electrical system.

The application focuses on less risk during software development, due to its bay-typical philosophy. The time and effort needed to digitalize and integrate substations into 800xA is highly reduced with Power Control Library due to the following features:

- Flexible configuration to several switchgear types (e.g. Incomer, feeder, bus coupler, etc.)
- Efficient configuration: Bay-typical philosophy, reducing engineering efforts for software development for ABB or 3rd party IEDs
- Enhanced substation control and monitoring environment: graphical status, interlocks, measurements and phasor diagrams

ABB Ability™ System 800xA Electrical Control System

Take control of your power

Take control of your electrical system

Every process industry has a substation that provides the necessary energy. ABB Ability™ System 800xA Electrical Control monitors and controls the substations in an industrial facility to ensure full availability with real-time applications. Users can control a process, manage a field crew and deliver outstanding operational efficiency with a single system.

There are three main benefits with an electrical control system:

Improved availability and safety

Complete substation information brought to the control room enables proactive action and appropriate decision-making. Trouble-shooting is faster through remote maintenance and creates a safer environment, removing people from electrical danger and increasing overall plant availability.

Energy efficiency

Integrated electrical control permits plant operators to see and understand power usage in a more coordinated manner, allowing new energy-saving opportunities to be explored and existing reduction programs to be enhanced.

Reduced costs

Communication capabilities are important to meet the needs of the substation automation applications for interoperability between devices. Significant savings can be achieved through reduced hardwired cabling on switchgear by connecting to intelligent devices. Simpler installations and reduced automation system are easier to engineer and maintain. Asset management strategies can be extended to electrical equipment, reduce plant downtime and improve production.

ABB Ability™ System 800xA

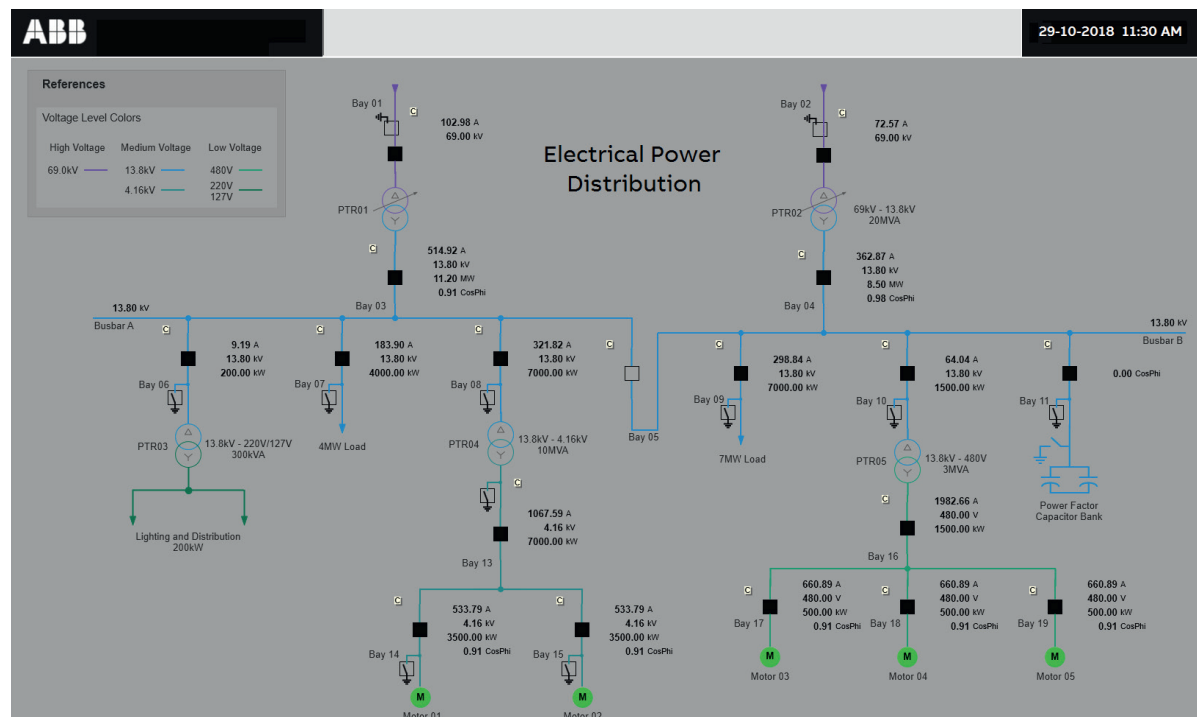
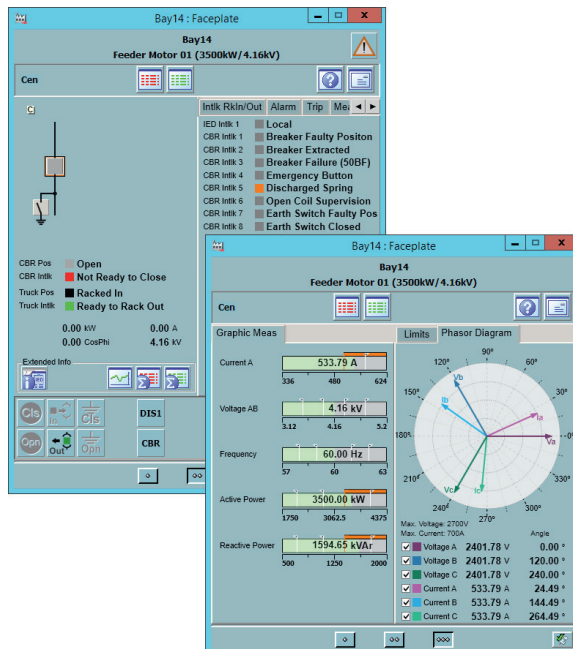


ABB Ability™ System 800xA Power Control Library



Your challenges

- Safety of personnel
- Increase availability of the energy supply to the process
- Reduce capital investment and operational expenditures

Our solution

Provide faster troubleshooting remotely and safely away from electrical danger with an enhanced substation control and monitoring environment.

Benefits

- Improve safety for people
 - Remove maintenance team from electrical danger
- Faster troubleshooting & maintenance
 - More information on the automation level allows for quicker analysis and problem solving
- Information in the right place at the right time
 - Information readily available where you need it
- Connect substations
 - Substations in different locations integrated under the same system

Functionalities

Remote problem solving

Maintenance team only goes to the substation when needed

- Alarm list based on sequence of events
 - Easier understanding of cause/effect after an electrical fault with information available remotely
- Electrical interlocks & protections on faceplates
 - Same information about interlocks and protection locally and remotely, in a synthesized manner, allowing for faster troubleshooting
- Access to disturbances record files
 - No need to go the substation to upload or view files, allowing faster and safer fault analysis
- Online documentation access
 - Single line diagrams, logic diagrams, technical manuals are a right-click away: Maintenance team gets to the faulty place with the right information in hand

Optimized system

Single system architecture promotes collaboration and control effectiveness

- Unified Process and Power Automation Systems
 - Process and Power Automation in the same plant control system shares the same database, engineering tools and operator stations, and promotes a collaborative environment
- More Intuitive System
 - Displaying more, and relevant, data in well-designed interfaces facilitates the plant supervision, operation and maintenance, enabling operators to make faster and more accurate decisions
- Digital protocols as the well-established IEC 61850 standard
 - Connect substation from distant locations due to use of digital protocols for communication between control and protection relays
- Standardized Engineering
 - Faster project development and commissioning reduces your project's risks and decreases maintenance efforts for mid to big-sized projects

ABB Ability™ MineOptimize

ABB Ability™ System 800xA Power Control Library is part of the innovative ABB Ability™ MineOptimize and CementOptimize digital portfolio. MineOptimize and CementOptimize are frameworks that encompass engineering, systems, applications and services to help mining and cement customers achieve the most efficient design, build and operation of any mining, mineral processing or cement facility.

With digitalization at its heart, ABB Ability™ MineOptimize and CementOptimize provide the ideal platform to reach top performance levels. The MineOptimize and CementOptimize digital applications rely on advanced libraries, software solutions and digital platforms to reduce process complexity while promoting safe and secure

production, thereby ensuring the right people have the right information at the right time. This allows a plant to maximize reliability, productivity and energy efficiency while optimizing planning and visibility across operations and the entire enterprise. These proven, horizontally and vertically integrated application building blocks for digitalization ensure that intelligent systems are easy to deploy and reach full potential to deliver sustainable profitability.

ABB Ability™ MineOptimize and CementOptimize offer a comprehensive suite of collaborative services designed to enhance day-to-day equipment efficiency, ensure performance is on highest level and make it easy to access expert guidance whenever and wherever required.

Integrated solutions from mine to market

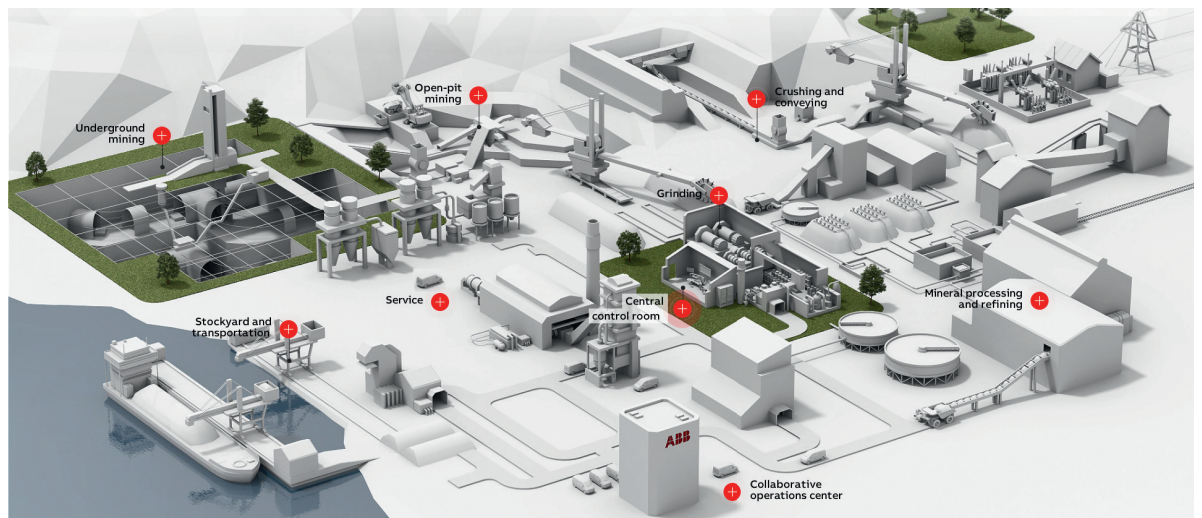


ABB Brazil Ltd
Industrial Automation
Process Industries
Av do Anastácio, 740
City América. São Paulo, SP, Brazil

abb.com

We reserve the right to make technical changes or modify the contents of this document without prior notice. With regard to purchase orders, the agreed particulars shall prevail. ABB AG does not accept any responsibility whatsoever for potential errors or possible lack of information in this document.

We reserve all rights in this document and in the subject matter and illustrations contained therein. Any reproduction, disclosure to third parties or utilization of its contents – in whole or in parts – is forbidden without prior written consent of ABB AG. Copyright © 2017 ABB
All rights reserved