



Process Automation, Energy Industries

Solutions and services line card

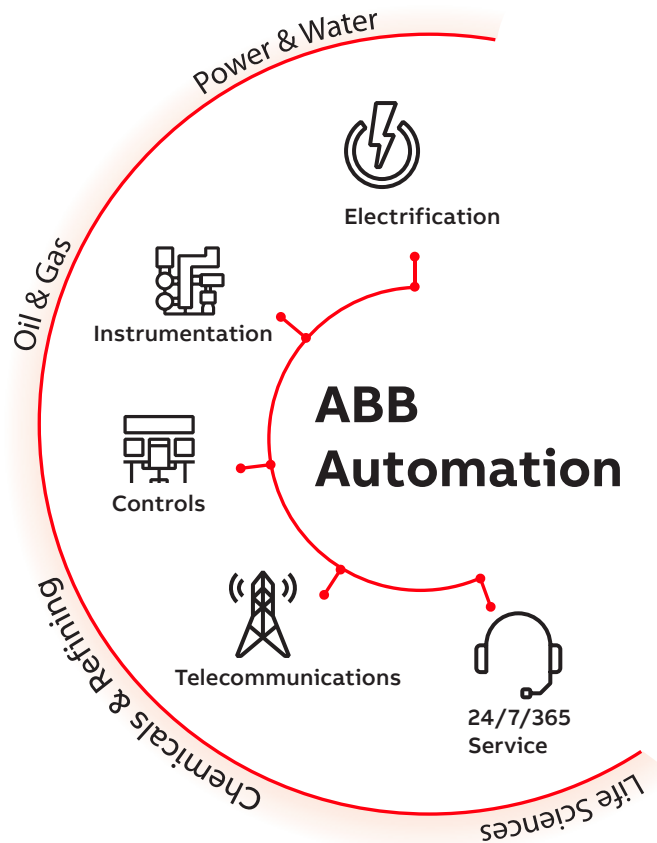
ABB automation

Safe, smart and sustainable

ABB provides products, solutions and services that enhance the productivity and energy efficiency of a broad range of energy industries.

ABB understands your needs to reduce risk, drive down costs and deliver a quality product, safely and on time. Our shared priorities and values will drive a successful outcome.

We enable safe, smart and sustainable projects and operations. Safe because we support the highest industry standards and always focus on risk reduction. Smart because our integrated electrification, instrumentation, control and telecommunication solutions optimize production. Sustainable because we know that efficiencies make the difference – environmentally and operationally.



Integrated solutions

to manage your schedule, cost and risk

Automation

- Distributed Control Systems (ABB Ability™ System 800xA, ABB Ability™ Symphony® Plus)
- Single Platform Process/Safety/Electrical Automation
- Electrical Automation Systems
- SCADA
- Programmable Logic Controllers
- Control Room Design
- Terminal Management Systems
- Manufacturing Execution System (MES)
- Manufacturing Operations Management (MOM)
- Wellhead Manager

Engineering, Consulting, Early Works

- FEED studies: control systems design, integrated automation and electrical systems, full scope MAC and MEC (electrical balance of plant)
- DCS technology migration assessments (obsolete 3rd party automation system to new ABB system)
- Power quality studies and electrical equipment audit and consulting services
- “Around the generator” assessments of excitation, static starter, synchronization, protection, turbine governors

Energy Management

- Flexible energy management and production monitoring system
- Process Power Manager (PPM)
- Virtual Power Plants
- Site energy management
- Smart charging

Condition Monitoring Management System (CMMS) Integration

- Complete interface with third-party systems

Electrical

- Prefabricated electrical and control buildings (e-houses, Power Distribution Centers (PDC)) general purpose, hazardous area rated, on/offshore PDC's
- Distribution skids (substations & switchracks)
- Mobile/trailer mounted substation applications
- Indoor/Outdoor turnkey substations and equipment (69 kV and below)
- Electrical systems design services
- Power Systems Analysis/Studies
- Arc Flash assessments and Power Studies
- Relay application engineering
- Integrated Drives Systems
- Process Power Manager (PPM)

Electrical Engineering and Integration

- Load shedding
- Power Monitoring System (PMS)
- Engineering and integration for electrical gear, protection systems, skid mounted equipment, third party devices, PLCs, Intelligent MCCs and Switchgear

Simulators

- Simulator Systems for Training and/or Testing (Control Algorithms or NERC/CIP)
- Simulation for industrial processes and power plants (low and high fidelity)
- Models: Electrical Network Model, Process modeling
- System 800xA and Symphony Plus simulators
- AC800M SoftController I/O Simulation Extension

Batch Management

- Recipe Management

The life
of your
project



Early Works;
Consultation
& Preparation



Design &
Engineering



Manufacturing
& Assembly



Life Cycle
Management



After Sales
Services



Excitation and Synchronization

- Static and indirect (brushless) excitation systems
- Scalable design: current range from 20 to 12,000 A
- Full-scope, retrofit and upgrade solutions
- Stand-alone Power System Stabilizer (PSS)
- Grid code compliance studies
- Potential Power Transformer (PPT)
- Synchronizing of large synchronous motors, power and industrial plants, and substations for automatic paralleling

Telecommunications

- Physical Intrusion Detection (Ground Radar, Fiber Optics, LIDAR)
- Closed Circuit Television (CCTV) and Enterprise Video Management Systems
- Access Control
- Public Address and General Alarm
- Ultra High Frequency/Very High Frequency (UHF/VHF) radio
- Wireless, Mesh Networking, PTP & PTMP Links, Microwave
- Private LTE
- Network as a Service (NaaS)
- IoT and IIoT Cybersecurity (Hardware & Software)
- Thermal Leak Detection
- Structured cabling, cabinets
- Local Area Network/Wireless Area Network, Telephony (Digital, IP and Analog)
- Safe worker and Man down solutions
- Integrated System Testing

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Life Cycle
Management



After Sales
Services



Fire and Gas Detection Systems

- Integrated systems including flame, smoke, thermal, toxic, and combustible detection products and control panels

Fire Protection

- Integrated Fire Protection Deluge systems

Instrumentation and Analyzers

- Flow measurement
- Temperature measurement
- Pressure measurement
- Analytical measurement
- Level measurement
- Valve automation
- Flame Scanners for boiler management applications



Blending and Transfer Solutions

- Liquid Blending (lubricants)
- Reactive Chemistry (grease, drilling fluids, enzymatic digestion)
- Piggable Systems (liquids, paints, resin, waxes)
- Solid to Liquid Dispersion (paint, water treatment, starch cooking, paper)
- Terminal Automation

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Life Cycle
Management



After Sales
Services

Service portfolio

to support your business needs

Care Agreements

ABB Care is a framework that provides customizable service levels with optional packages

- Technical support via phone support, prepaid service hours, mobilization to site, and resident engineers
- 24/7 self-service online with personalized business portal
- Software maintenance
- Remote service solutions
 - Remote Insights augmented reality support
 - Remote System Support
- System diagnostics

Life cycle parts services

- Spare parts
- Parts repair service
- Spare parts need assessment
- Parts Step Up program
- Preventative maintenance kits
- Parts root cause analysis service

Evolutions and upgrades

- Evolution and upgrade programs/paths defined for all generations of ABB DCS systems
- Evolution programs/paths defined for System 800xA based electrical control systems and applications including:
 - Electrical Control System (ECS)
 - Power Management System (PMS)
 - Process Power Manager (PPM)
- Excitation system life cycle support

PLC services

- PLC absorption projects
- PLC integration
- PLC replacements

HMI replacements

- HMI consolidation
- Control room consolidation
- Hardware migration

ABB Ability™ solutions for service

- Asset health services
 - System scan, benchmark, fingerprint, assessment, health monitoring, update service
- Cybersecurity
 - Cybersecurity benchmark, security update bulletin, hardening guidelines, malware protection, backup/recovery
- Asset management
 - Condition-based monitoring for process, electrical and rotation equipment
- Performance improvement
 - Performance/control loop optimization, alarm & safety life cycle management, control system simulation

Training

- ABB classroom, on-site or online training
- Product, system, process and technology trainings designed for engineering, operation and maintenance

Installation and commissioning

- Functional test and on-site configuration of electrical, telecommunications and automation components
- Full equipment completions
- Commissioning and start-up

Engineering and consulting

- Services for complex and high-hazard industries
- Network design
- Batch process analytics
- Industrial asset management, product, processes and operational infrastructure improvements
- Deliver projects/address issues quickly and cost-effectively

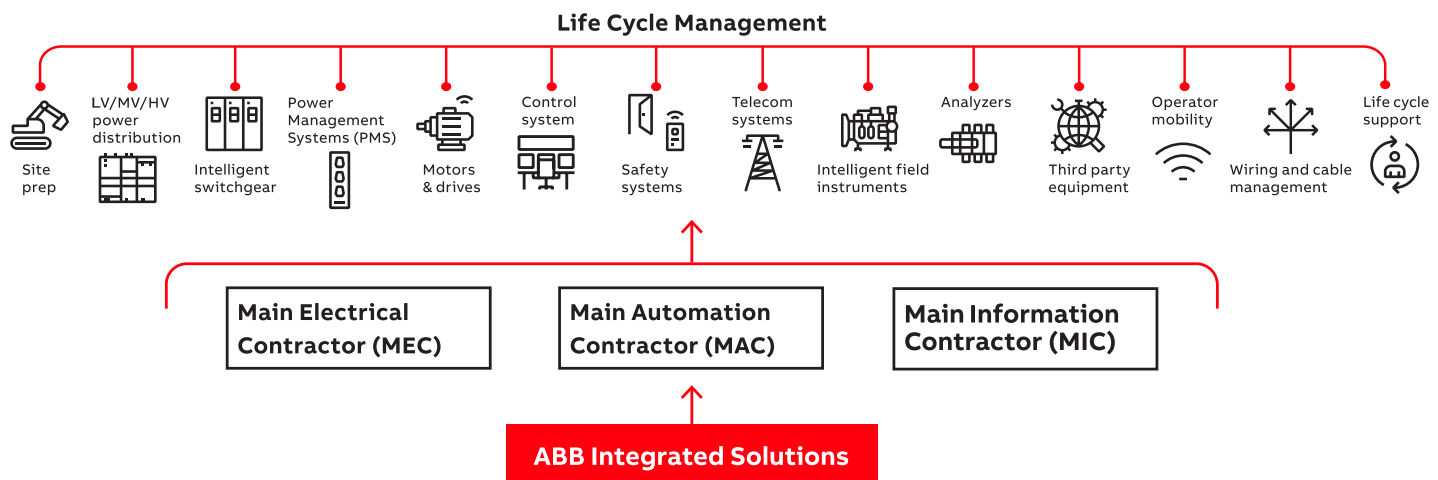
Remote and collaborative operations

- ABB Remote Monitoring and Operations Rooms (ARMOR)
- Remote and collaborative operations centers
- Remote Training as a Service (TaaS)

ABB solutions and services

innovative and integrated solutions that digitalize, automate and electrify industry

Using ABB as a single source system integrator to bring complex and remote systems and subsystems on line avoids risks associated with managing multiple suppliers, such as fragmented responsibilities, complications, delays and cost overruns. As a single source supplier, ABB bears the cost and risk of interfacing with the various disciplines and subsuppliers.



Market segment solutions

For additional information on ABB solutions in your market, please scan the appropriate QR code below.



Power & Water



Oil & Gas



Chemicals &
Refining



Life Sciences



ABB Inc.

24/7/365 Emergency Support: +1 (800) HELP 365

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