







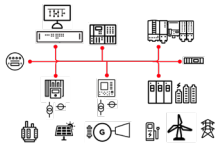
Utility solutions




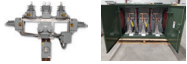










Safe, smart and sustainable solutions for the North American market








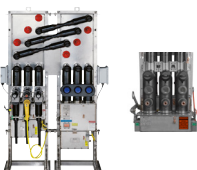








Utility solutions











Safe, smart and sustainable solutions
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Product	Picture	Offering	Benefits
Protection, control and automation solutions		FT Flexitest™ switches and test accessories	Test switches are designed and manufactured to allow for quick and easy multi-circuit testing of switchboard relays, meters and instruments by any conventional system. The switches can be ordered in a variety of current and voltage configurations with black or clear covers. FT switches are offered as 10-pole, 14-pole, rear extended terminals, front connected or in a rack-mount configuration. Cover options, including cover shield and slotted cover, are available to meet varied application requirements. Test accessories, such as in-service test plugs, ergonomic separate source test plugs and individual current circuit test plugs, enhance testing efficiency.
		Arc protection: REA series relays	With safety a top priority, the REA family of relays is designed to help protect medium and low voltage air-insulated switchgear against arc incidents.
		Microprocessor relays REX610, REX615, REX640 and software tool PCM600	The Relion® relay family offers the widest range of products for the protection, control, measurement and supervision of power systems for ANSI applications. To help ensure interoperable and future-proof solutions, Relion products have been designed to implement the core values of the IEC 61850 standard, including MMS, GOOSE and sampled values. The IEC 61850-compliant protection and control IED manager PCM600 tool provides versatile functionalities for the entire life cycle of all Relion protection and control IED applications, at all voltage levels.
		REC615 Remote switch control / RER615 Recloser control	REC615 and RER615 provide optimal capability to enhance grid reliability with a wide range of protection, remote control and monitoring, fault indication and power quality analysis functionality. REC615 is suitable for a wide variety of power distribution networks, including distributed power generation, secondary equipment such as medium voltage disconnects, switches and ring main units. RER615 is designed as a recloser controller in medium voltage secondary distribution systems, including radial, looped and meshed distribution networks, with or without distributed power generation.
		Centralized-virtualized protection and control system SSC600 / SSC600 SW	Designed to support the increasing digitalization of substations, ABB Ability™ smart substation control and protection for electrical systems, SSC600, represents an innovative way of looking at protection and control in distribution networks — with all protection and control functionalities centralized in one device OR in a virtual machine.
		SCADA system — ZEE600 for unlocking digitalization and integration in the electrification process	ABB zenon Electrification Edition ZEE600 fulfills the role of a seamless integrator of diverse devices, such as ABB and third-party protection relays, meters, substation equipment condition monitoring units, programmable logic controllers (PLCs) and remote terminal units (RTUs), deployed in digital electrification solutions. A flexible substation automation system that provides localized automation, this unit enables local HMI, data concentration and advanced smart grid automation, such as FDIR and automation.
		Microgrid power management and control solution	Microgrid PMS helps ensure a reliable and stable power supply in a utility microgrid by meeting demand and maintaining frequency and voltage, as well as grid commitment. The solution has the capability to handle both transient and steady-state functionality in accordance with IEEE 2030.7 and IEEE 1547.

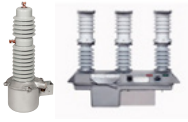








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Instrument transformers		Current and voltage instrument transformers 0.6–34.5 kV	Dry-type instrument transformers for indoor and outdoor use provide standard accuracy and high accuracy metering, relay protection and control power. Utility applications include use in power transformers, breakers, capacitor banks, substations, metering cabinets and pole mounting.
		AccuRange® current transformers High accuracy and extended range, 0.6–34.5 kV	AccuRange current transformers deliver savings through improved accuracy metering and reduced inventory requirements. These units exceed 0.15S metering class accuracy and provide 0.15% accuracy from 1% of the nominal current through the rating factor.
		Voltage transformers with ResiVolt™ technology, Very fast transient (VFT) resistant	The world's first dry-type voltage transformers designed for VFT resistance. Units with ResiVolt technology offer enhanced withstand to VFT overvoltages, resulting in unparalleled performance and safety in renewable and frequent line switching installations.
		PMU (primary metering unit) 5–34.5 kV	Primary metering units are designed for three-phase primary metering in pole-mounted or pad-mounted applications. They consist of medium voltage current transformers (CTs), voltage transformers (VTs) or combination transformers (CT/VTs) that have a smaller footprint and fewer connection points for easier installation. Pole-mounted PMUs are mounted on an aluminum frame, and pad-mounted PMUs are mounted inside a steel cabinet.
Sensors		DistribuSense™ current, voltage and combination outdoor sensors For installation on 15–34.5 kV overhead lines	DistribuSense sensors offer lighter weight, greater safety, easier installation, more reliability and better linear response to a wide range of varying loads when compared to traditional instrument transformers. They are ideal for grid modernization applications and provide utilities with improved visibility, reliability and grid efficiency.
Overhead disconnect switches		DCD double insulator single-phase	Hookstick-operated switch used for sectionalizing or isolating circuits on electrical distribution systems up to 38 kV.
		ITD single-phase, non-loadbreak, inline tension	Used for manual switching of de-energized or parallel circuits of overhead distribution lines rated 15–38 kV.
		RBD single-phase bypass	Provides a means for bypassing and disconnecting reclosers or voltage regulators, allowing maintenance on equipment without service interruption.
		SID (15–38 kV, 600 or 900 A) LSID, loadbreak (15.5–15/27 kV, 600 A)	Single-phase disconnect on overhead distribution feeders and in outdoor distribution substations. Mounts like a standard cutout or directly on a pole. Used as a disconnect between overhead and underground lines.
Outdoor circuit breakers		R-MAG® magnetically actuated outdoor circuit breaker 15–38 kV, 200 kV BIL and 40 kA	Designed with a magnetic actuator mechanism, the field-proven R-MAG breaker reduces costly maintenance intervals, increases reliability and improves safety. Available with arc-resistant and NEMA 4 housing.
Overhead distribution cutouts and sectionalizers		ICX, LBU-II, NCX, EU	Distribution cutouts are used on overhead distribution systems to provide overcurrent protection and give visible indication of fuse operation and sectionalizing break points for maintenance personnel.
		AutoLink sectionalizer Up to 38 kV, 200 A, 8 kA, 170 kV BIL	Improve grid reliability by adding a simple AutoLink or smarter WiAutoLink wireless sectionalizer. Fits on a standard ICX cutout body, and only one style per voltage class reduces inventory. A loadbreak option allows for a safe manual opening, and the units can be operated in single, bi-phase or three-phase operation.
Capacitor fuses		Outdoor: CXP, COL, CLXP Indoor: CLC, CIL	Indoor and outdoor current limiting and expulsion fuses from 1.2–26.2 kV and 6–100 A.
Passive voltage indicators		VisiVolt™ For outdoor and indoor systems, 3–36 kV	Adapted for permanent installation on busbars and naked or insulated metal conductors in medium voltage systems, the VisiVolt indicates the presence of voltage to provide a higher level of safety.

Product	Picture	Offering	Benefits
Reclosers		elastimold Solid dielectric reclosers Up to 38 kV	ABB's Elastimold™ solid dielectric reclosers are built for the evolving smart grid with integral load-side voltage sensors and provision to add optional source-side voltage sensors. These reclosers stand up to harsh environments, featuring proven solid dielectric and silicone insulation with improved weatherability and UV performance. The modular design allows for fast and easy field upgrades and retrofits. The three-phase model weighs 30% less than typical reclosers, making it easier and safer to install, while the single-phase model has a pole-rotation mounting bracket for easier installation. Triple-single-phase configurations are also available. A simple, maintenance-free magnetic actuator mechanism increases reliability, and 360° position indicator provides easy visibility from ground level.
		GridShield® triple-single recloser Up to 38 kV, 1200 A, 16 kA, 170 kV BIL Highest accuracy, ±1%, embedded dual voltage sensors Flexible controller with ABB, Beckwith and SEL options	ABB's newest generation recloser with high accuracy single and dual embedded voltage-sensing capability, highest creepage distance for heavily polluted environments, hydrophobic cycloaliphatic epoxy (HCEP) poles to shed water and state-of-the-art vacuum interrupters is available in single-tank or modular pole design to support the grid of tomorrow. GridShield can be paired with multiple ABB and non-ABB recloser controllers, making it completely interchangeable and flexible.
		OVR three-phase recloser Up to 38 kV, 1200 A, 16 kA, 170 kV BIL	A three-phase recloser with options for single and dual voltage-sensing capability, hydrophobic cycloaliphatic epoxy (HCEP) poles and state-of-the-art vacuum interrupters is a versatile and economical recloser, not only for reclosing but also for sectionalizing and automatic switching to tackle everyday smart grid challenges. Paired with the RER615 Relion® recloser control, it offers seamless integration into the network using high-end protection, control, automation and communication capabilities.
		Eagle self-powered single-phase recloser	Maximizing reliability with a safe and simple solution, the Eagle self-powered single-phase recloser helps improve reliability indices for utilities by eliminating many sustained and momentary customer outages. It also helps lower operational costs by reducing the number of service calls to address outages caused by transient faults. The separately powered long range communication (LRC) cabinet maintains a constant communication link to the Eagle reclosers paired with it. This allows users to operate the Eagle reclosers locally or remotely.
Motor control centers – Medium voltage		SafeGear® arc-resistant motor control center 2.4–7.2 kV	SafeGear arc-resistant construction maximizes protection for equipment and personnel. It provides a superior solution for increased worker safety with enhanced reliability and ease of use. Advance provides cost-effective and innovative ways to power medium voltage motors.
Motor control centers – Low voltage		ReliaGear® LV MCC Up to 600 V, 3200 A and 100 kA	The ReliaGear LV MCC provides a safer, smarter and more sustainable means to protect and control motors by featuring Tmax® XT circuit breaker technology, UMC 100.3 motor protection relays and the ACS580 family of variable frequency drives. This flagship low voltage motor control center is full featured for any industry need, with up to 3200 A bus, across-the-line starters through size 6 and variable speed drives up to 500 HP.
		MNS-MCC Up to 4000 A horizontal and 1600 A vertical bus Also available in arc-resistant	Designed for the highest degree of safety, ease of installation and maintenance, reliability and flexibility, the MNS-MCC provides users with maximum uptime. The unique and innovative design raises the bar in arc flash protection for low voltage motor control centers. The MNS-MCC provides industry-leading features that afford operators optimal safety and efficiency while performing both normal and maintenance operations.

Product	Picture	Offering	Benefits
Switchgear – Medium voltage		Advance® air-insulated metal-clad switchgear 5–15 kV and 27 kV	Advance is ABB's ANSI platform for 5, 15 and 27 kV metal-clad switchgear, featuring a narrow footprint and designed and tested according to IEEE C37.20.2. With galvanized steel construction, hem bending techniques, and Delrin arc-quenching contacts, it is designed with safety, reliability and durability in mind. Advance is available as digital switchgear and with 24x7 asset health monitoring, SwitchgearMD™. Digital switchgear offers enhanced safety, simplicity by design and reduced operational costs.
		SafeGear® air-insulated arc-resistant metal-clad switchgear 5–15 kV	SafeGear's arc-resistant construction maximizes protection for equipment and personnel. SafeGear HD is the "high-duty" version of SafeGear, specifically designed for interruption and arc fault ratings of 63 kA. These products provide a superior solution for increased worker safety with enhanced reliability and ease of use. SafeGear and SafeGear HD are available as digital switchgear and with 24x7 asset health monitoring, SwitchgearMD™. Digital switchgear offers enhanced safety, simplicity by design and reduced operational costs.
		 Solid dielectric switchgear Up to 38 kV	Elastimold™ solid dielectric switchgear provides compelling value for pad-mount, riser-pole and vault applications. Maintenance-free vacuum and molded EPDM solid dielectric insulation offer more than 50 years of field-proven performance, and all components are sealed and fully submersible. With no oil or gas involved, there is no leakage and no maintenance required. Dead-front construction eliminates exposure to live components, and the optional Tru-Break® visible break module ensures that the circuit is dead and isolated. The non-position-sensitive switchgear features a compact and lightweight design that fits into tight vaults and is modular for combining molded vacuum switches and interrupters in an unlimited number of ways and configurations.
		ZX family of gas-insulated arc-resistant switchgear 15–40.5 kV	Combining modern vacuum interrupter technology with a low-pressure SF6 gas insulation, all primary components inside the SF6 cabinets are maintenance-free during their lifetime, making the ZX family ideal for harsh, aggressive environments with a space-saving compact design.
		SafePlus secondary gas-insulated switchgear 6–40.5 kV	SafePlus is a metal-enclosed compact switchgear system for distribution applications from 6 to 40.5 kV. The switchgear offers a unique flexibility due to its extensibility and the possible combination of fully modular and semi-modular configurations. The switchgear is type tested according to ANSI/IEEE C37.20.3, C37.58, C37.54, and UL listed. It is rated 38 kV, 20 kA, 600 A, non-arc resistant. Available panels include cable switch, vacuum circuit breaker and air-insulated cable riser.
Switchgear – Low voltage		ReliaGear® LV SG	Built to ANSI standards, ReliaGear LV SG incorporates the best of both worlds: cutting-edge Emax 2 air circuit breakers with Ekip trip unit technology, all integrated into the proven AKD switchgear platform. Bus insulation/isolation is optional and integrates Emax 2 breaker and Ekip trip unit technology. Also features an optimized footprint that fits into a smaller area for the most common configurations. E1.2 Emax frame provides a 15-inch minimum four-high stack width.
Fault current limiters		IS-Limiter current-limiting device	The world's fastest current-limiting and switching device rated up to 40 kV, the IS-Limiter is capable of detecting and limiting a short-circuit current during the first current rise, i.e., in less than a millisecond. It can be applied in early system design stages or to increase ratings in existing systems, thereby reducing capital costs and improving system functionality.
		FC-Protector®	Unique standard and compact fault current limiter for indoor and outdoor use allows fast and easy integration into new and existing systems, resolving short-circuit challenges.
Active internal arc protection devices		UFES	Provides innovative arc-fault protection, offering the highest possible level of safety for personnel and equipment, maintenance of secure power supply and reduction of production outages.
Generator breakers		ADVAC® G Vacuum circuit breakers for generator switching applications	A complete product line compliant with the latest global dual logo IEC/IEEE 62271-37-013 standard, featuring the familiar ADVAC design for easy integration into metal-clad switchgear applications, increasing benefits in a compact footprint and optimizing maintenance.

Product	Picture	Offering	Benefits
Load interrupter switches – Medium voltage		BreakMaster™ LIS load interrupter switchgear	BreakMaster LIS load interrupter switchgear, featuring the advanced interrupting technology of the VersaRupter® switch, provides dependable, economical load switching and protection for medium voltage circuit applications from 2.4 kV through 15 kV in 600 A, 40 kA load interrupting ratings. The 1200 ampere rating is available using an alternate switch.
		BreakMaster™ V With vacuum circuit breakers (instead of fuses)	For facilities concerned with arc flash safety standards, BreakMaster V provides reduced arc flash incident energy levels for customers on their existing medium voltage equipment.
		Load interrupter switch (LIS) retrofit	The LIS retrofit provides reduced arc flash incident energy levels on existing medium voltage equipment by retrofitting a fixed mounted vacuum circuit breaker (VCB) into the fused compartment of the LIS. Operating in three cycles, the fast-acting VCB is superior to fuses and offers an arc flash mitigating solution designed in response to arc flash safety standards.
		VersaRupter® MV indoor switch	The VersaRupter general-purpose, three-pole, loadbreak switch offers switchgear owners and assemblers the advantages of an advanced interrupting technology and proven, dependable performance in a compact design. The switch is available to switchgear assemblers as a building block for metal-enclosed and pad-mounted switchgear applications in ratings from 4.76–38 kV.
Switchboards		ReliaGear® SB	ReliaGear SB features a safer, more reliable design and groundbreaking Emax 2 power circuit breakers or Tmax® XT plug-in molded-case circuit breakers to dramatically save time, labor and cost while helping ensure greater energy efficiency and reliability.
Busway		ReliaGear® busway	ReliaGear busway combines benefits of the proven Spectra™ series busway, the sophisticated technology of the SACE® Tmax® XT circuit breaker and fused OT/OS switch in a plug-in unit and (PTO) with SACE® Tmax® and Power Break® II circuit breakers. With a sleek modern look, ReliaGear busway is a custom-designed, modular electrical power distribution system available in both feeder and plug-in styles, up to 5000 A.
Cable accessories		 Underground cable accessories	The Elastimold™ brand offers one of the largest product offerings in the industry of IEEE 200 A loadbreak and deadbreak elbows and 600 A and 900 A with EPDM rubber molded products and epoxy components. All products are assembled in the USA in state-of-the-art facilities with centralized stocking in the USA and are 100% tested. The Elastimold™ brand's long, innovative history includes pioneering such products as extended, repair and jacket seal elbows. Elastimold accessories, available from 5–35 kV, are used to connect, ground, splice, terminate and protect underground cable.
		 Current-limiting fuses	Hi-Tech™ is an industry brand of current-limiting fuses with advanced designs to provide superior protection in small, cost-efficient form factors to optimize value, reliability and reduce system life cycle costs. With fault clearing capabilities in less than one-half cycle, Hi-Tech current-limiting fuses reduce the let-through energy, thereby significantly reducing stress on equipment and increasing safety. One hundred percent factory tested and sealed, rugged machined-brass end caps and patented damage sensors are just a few benefits. ABB now offers the Hi-Tech Valiant™ full-range current-limiting fuse for fire mitigation. This fuse incorporates over 20 years of field-tested Hi-Tech full-range fuse technology combined with a new visual indicating mechanism. The Hi-Tech Valiant current-limiting fuse's special construction contains the explosive fragments that could otherwise be emitted during fuse operation — fragments that could fall on dry vegetation and ignite a wildfire.

Product	Picture	Offering	Benefits
Underground and network connectors		HOMAC Network connectors	The Homac™ brand continues to be one of the industry leaders in underground distribution connectors and network connectors. World-class product configurations meet transformer, hand hole and pedestal application needs. One hundred percent of our Flood-Seal® bus connectors are subjected to a dielectric test at 4000 volts for 60 seconds to ensure insulation integrity. Our product experts are ready to work with you directly to develop customized solutions to meet your specific needs.
		Transformer connectors	
		Multiport connectors	
		Splice systems	
		Compression	
		Grounding	
		HOMAC Street lighting connectors	
Overhead connectors		Blackburn Terminals	The Blackburn™ brand stands for quality and reliability in connecting overhead distribution power lines and equipment, encompassing a complete line of splices, taps and terminals for all overhead distribution applications. With Blackburn Storm-Safe® breakaway service entrance kits, when ice-loaded or debris-damaged service cables come down, they are de-energized, with no further damage to equipment or customer property.
		Taps	
		Splices	
Substation connectors		HOMAC Welded aluminum	Homac™ substation connectors encompass a broad line of high-quality substation connectors. With weldment and bolted products up to 500 kV, the wide Homac product offering includes a full line of couplers, taps, bus supports, terminals and expansion connectors. Homac products are made in plants that are ISO 9001-2008 certified for both design and manufacturing to ensure quality and reliability. Prefabricated bus assemblies, A-frames and jumpers are also available to save you time and money on the jobsite.
		Bolted aluminum	
		Bolted bronze	
		EHV 345–500 kV welded and bolted aluminum	

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Capacitor bank switches		JOSLYN Varmaster and VerSaVac® switches	Joslyn Hi-Voltage® switches are designed to switch capacitor banks for improved system efficiency, voltage profile and capacity. Using vacuum interruption, solid dielectric insulation and solenoid operators, these switches offer long, reliable service life of up to 100,000 expected operations with no required maintenance. They contain no oil or gas, eliminating the associated environmental concerns and regulatory requirements for monitoring usage and leakage. VerSaVac (VSV) distribution capacitor switches are available in single- and three-phase, 15–38 kV, 200 A. Varmaster (VBM) substation capacitor and reactor switches are available in one-pole and three-phase, 15–72.5 kV, 300 to 600 A. A zero voltage closing (ZVC) control option provides transient mitigation of system over-voltages and inrush current.
		DS1	The DS1 is the first synchronous switch isolated in dry air specifically designed for transient-free capacitor bank switching. Thanks to an integrated electronic control unit, semiconductor technology and synchronization with the network, the DS1 increases reliability and prolongs the life of system components such as capacitor banks and transformers.
		VD4-CS 38 kV vacuum circuit breaker	ABB offers this vacuum circuit breaker with servomotor actuation and new vacuum interrupter technology up to 38 kV, 1250 A, 31.5 kA, and up to 20,000 operations with extremely low probability of re-strike, to support your business needs in reactive power compensation.
Capacitor bank controllers		FISHER PIERCE 54000 and 55000 series capacitor controllers	Fisher Pierce™ 54000 series controllers optimize grid power performance and power factor corrections. They can be used in conjunction with Joslyn Hi-Voltage® VerSaVac® and Varmaster VBM capacitor switches. The controllers offer durability with coated stainless steel or plastic cabinets and different mounting options, including pole mount, meter socket jaw and configurable base plates. They offer remote control communication capabilities, user-friendly programming via front panel or PC-based software, and data logging that captures 10,000 events.
Packaging and solutions		Single point of contact for products and services related to project packages or modular solutions	ABB offers a comprehensive approach to product administration for modular solutions such as E-houses and skid solutions. By managing the design, procurement, installation, logistics and commissioning of all project elements, customer engineering costs, risk and complexity are reduced.
Service		Replacement parts, emergency services, equipment start-up and field commissioning, power system studies and reports, equipment modernization and upgrades, motor services, training and turn-key projects	ABB Electrification Service offers service, retrofits and upgrades on installed equipment regardless of the manufacturer, as well as consulting services, power system studies and turn-key project support. ABB's superior technology, engineering resources and field technicians help provide a multitude of services to fit customer needs.
E-mobility		Public and passenger vehicle charging infrastructure	With nearly 15 years of experience deploying high power charging infrastructure for public charging locations, ABB E-mobility EV charging solutions serve all passenger vehicles in a range of power up to 350 kW. Our 24/7 connectivity services enable OCPP integrations, varied payment solutions and remote updates backed by service level agreements. Additionally, ABB E-mobility offers NEVI-enabled solutions that are Build America, Buy America compliant and meet all NEVI program commercial and technical requirements.
		Fleet and commercial vehicle charging infrastructure	ABB E-mobility's fleet charging solutions, including AC power up to 19 kW and DC power up to 360 kW, simplify electrification of medium- and heavy-duty fleet operations by providing a seamless integration into existing infrastructure, as well as a seamless charging experience for every sized site. Through smart charging and energy management capabilities, we enable predictable charging operations and business continuity, including high uptime for chargers backed by best-in-class service and maintenance programs.
		Bus and transit charging infrastructure	HVC charging systems from ABB E-mobility cover a robust DC power range up to 450 kW and 850 VDC via CCS and pantograph-based connections. The HVC overnight charging solution allows connection of up to three depot charge boxes with a single power cabinet, where vehicles are charged sequentially over time. The pantograph opportunity charging systems can deliver high-power charging via an automated rooftop connection in charge times of 3 to 6 minutes at endpoints, terminals and intermediate stops, mounted on a pole or ceiling, without impacting daily route operations. All ABB E-mobility HVC solutions can meet Buy America (Rule 49 CFR Part 661.5). ABB's HVC charging systems come with an extensive suite of connectivity features including network integrations as well as remote services such as monitoring, management, diagnostics and software upgrades.