

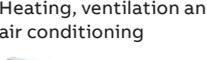
Global product offering for distributors

ABB offers technology across the full electrical value chain from substation to the point of consumption for both low- and medium-voltage, including UPS and electric vehicle charger, to enable safer and more reliable power. Our type-tested specialist products, systems, and solutions are designed to meet the specific requirements of a wide range of industries.

Low-voltage

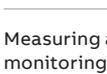
| Product / Offering | Benefits and features |
|---|---|
| <p>Boxes and Fittings</p>  | <p>ABB Installation Products set the standard for non-metallic and metallic boxes, covers and fittings with brands such as Carlon®, Steel City®, Iberville® and Red Dot®. These premium products continue to supply the industry with innovative ideas, easier upgrades and a long, service-free product life.</p> |
| <p>Cable ties, tools and accessories</p>  | <p>ABB offers one of the industry's broadest ranges of innovative solutions for fastening, bundling and securing wire and cable, including the trusted Ty-Rap® and Ty-Fast® cable tie brands in multiple sizes, colors and specialty materials for demanding applications. Our range also covers many mounting bases and easy-to-use tools.</p> |
| <p>Cable tray and metal framing</p>  | <p>T&B® cable tray is a cost effective, reliable and adaptable alternative to conduit systems. Additionally, ABB offers a comprehensive line of metal framing and cable tray, including the industry's only 100% plated products, our 11/2" modular system, and hundreds of accessories to complete any job.</p> |
| <p>Spring steel fasteners</p>  | <p>Spring steel fasteners offer a quick, easy and reliable method of affixing services to steelwork without the need for making brackets, drilling holes, or using nuts and bolts. All products are manufactured to EN1449 – part 1.15 grade CS70, and are suitable for indoor or outdoor use, and for mildly corrosive environments.</p> |
| <p>Wiring duct</p>  | <p>Premium quality duct for point-to-point wiring is ideal for electrical enclosures, machine building and data/communications panels and cabinets. Offering includes imperial, metric and DIN duct in standard materials and specialty materials that are halogen-free.</p> |

| Product / Offering | Benefits and features |
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| <p>Wire termination and tools</p>  | <p>A full line that includes insulated and non-insulated terminals, splices, wire joints, disconnects, ferrules, heat-shrinkable terminals, splices and disconnects in imperial and true metric sizes. A complete set of tooling is included.</p> |
| <p>Heat shrink solutions</p>  | <p>A broad range of heat shrink products with different wall thicknesses (thin, medium, thick), packaging (reels, cut lengths, dispenser boxes, pre-cut bags), shrink ratios (2:1, 3:1, 4:1), different colors, pre-molded parts, with or without glue are offered (dual).</p> |
| <p>Compression cable lugs and tools</p>  | <p>AWG, IEC and DIN compression connectors, made of the highest-grade materials offering high conductivity/low resistance, meet or exceed all industry standards. Range includes straight and angled connectors and splices, plus a full range of mechanical, pneumatic, and battery operated compression tools.</p> |
| <p>Earthing grounding and lightning, and surge protection</p>  | <p>With our Blackburn® and Furse brands, we offer a complete range of grounding and lightning protection systems, grounding connectors, and surge protection devices (SPD) to protect your building, processes and people.</p> |
| <p>Conduit and fittings</p>  | <p>ABB is a global leader in metallic and non-metallic solutions cable protection solutions for applications in rail, food & beverage, machinery, construction, automotive, power generation, marine, renewables and hazardous areas.</p> |
| <p>Emergency lighting</p>  | <p>ABB offers of a comprehensive portfolio of stylish and robust emergency lighting, central battery supply, and monitoring systems. With our optimized lighting optics based on the latest LED technology, we are able to offer slim and stylish luminaries that lower energy and maintenance costs. (Note: Building and safety standards and brands vary by country.)</p> |
| <p>Light switch ranges</p>  | <p>Modern light switches are more than just functional; they can serve as fascinating design objects. They combine aesthetic quality with innovative technology. ABB has a full range of solutions to meet local requirements and consumer tastes.</p> |
| <p>Socket outlets</p>  | <p>Living without electricity these days is nearly impossible. However, electricity can also quickly become life-threatening. Devices can become unsafe or defective, or a child could tamper with the socket outlet. Hazards also occur by unintentionally drilling into a cable or from lightning strikes. All this is prevented when one has installed the safe and convenient socket outlets from ABB.</p> |
| <p>Data communication</p>  | <p>Increasingly, adapters are being used in home theatre and entertainment systems. The new communication adapter is suitable for LCD or plasma TV, DVD and Blue-Ray devices, hard disk recorders and similar devices.</p> |
| <p>Multimedia</p>  | <p>ABB offers a flexible and convenient audio system for entertainment and communication. Its high-quality components impress with the utmost in functionality, intuitive operation and innovative design. In combination with the practical accessories it is a unique range of high-performance products that offers individual solutions for every application.</p> |
| <p>Movement/presence detectors</p>  | <p>These innovative and high-quality movement and presence detectors by ABB simply make life more comfortable. They automatically manage many tasks in every area of the building, both indoors and outdoors. When it comes to safety, you know precisely when light is needed. Other functions such as heating and air-conditioning can be intelligently and reliably integrated. Busch-Watchdogs are a unique combination of design, safety, efficiency and comfort.</p> |
| <p>Smoke detectors/heat detectors</p>  | <p>A fire can start quickly and unexpectedly. Many heat sources are used in the home-especially the kitchen. Suddenly the doorbell rings, you start chatting with your neighbor, the saucepan overheats and a fire starts. Busch-Smoke alarm detector Professional LINE and Busch-Heat alarm detector ProfessionalLINE alert you to the danger with a loud alarm signal and thereby prevent a disaster.</p> |

| Product / Offering | Benefits and features |
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| <p>Management of blinds</p>  | <p>The blind management range opens new dimensions for the residential housing market. You can now enjoy greater living comfort, safety and economic efficiency in your house. The blind management system is suitable for controlling all motor-driven blinds, roller blinds and awnings. With the replaceable operating elements, the comfort increases with the demand.</p> |
| <p>Room temperature controller</p>  | <p>Having a room at a comfortable temperature is important to our sense of well being. Heated or air conditioned rooms can be optimally adjusted according to user-defined settings.</p> |
| <p>Timers</p>  | <p>There are household tasks that must be done each day. Why not use a timer to manage these tasks, leaving time for more important things.</p> |
| <p>Dimmer</p>  | <p>Comfortable control of light for a wide range of lamps such as LED lamps, conventional incandescent lamps, 230 V halogen lamps, as well as low-voltage halogen lamps with conventional inductive or electronic transformers. ABB care for clarity and safety in the selection of dimmers.</p> |
| <p>Security technology</p>  | <p>Safety and security are top concerns for families everywhere. ABB is committing to keeping families safe where they work, live, and travel.</p> |
| <p>Door entry systems</p>  | <p>ABB-Welcome® provides comprehensive comfort, greater security and elegant design. The fascinating design and innovative technology of our door entry system can fully complement new construction or rehab of existing buildings.</p> |
| <p>Industrial plugs and sockets</p>  | <p>Easy to use, tough and supporting critical power, with safety as the highest priority for a wide range of applications. ABB has the full range of plugs and sockets for use in the harshest environments.</p> |
| <p>ABB I-BUS® KNX Smart home and intelligent building control</p> | |
| <p>Illumination and light sensors</p>  | <p>ABB i-bus® KNX ensures optimum lighting of industrial and office buildings as well as private dwellings. The lighting requirement is monitored and controlled. In addition, subsystems (such as 1–10 V lighting control, DALI) and their interfaces are supported.</p> |
| <p>Shutters and sun protection</p>  | <p>ABB i-bus® KNX controlled roller shutters, windows and blinds with sun position controlled louvers allow optimal lighting conditions and contribute to improved temperature and climate control in the room.</p> |
| <p>Heating, ventilation and air conditioning</p>  | <p>ABB i-bus® KNX integrates the heating, air-conditioning and ventilation to a comfortable and efficient climate control. Measured temperature values in the rooms are recorded and supplied to the heating and cooling control to generate the optimum temperature and air quality.</p> |
| <p>Security and surveillance</p>  | <p>The combination of professional ABB security technology components and ABB i-bus® KNX devices provides optimum building monitoring and warning against unauthorized entry. Emergency call stations allow immediate notification if help is required. Technical detection alarms (water, smoke, gas) can also be integrated.</p> |

| Product / Offering | Benefits and features |
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| <p>Visualization, display and signalling devices</p>  | <p>Networked structures work much more efficiently than individual systems. In both residential and business facilities, energy consumption is reduced, thereby reducing operating costs. At the same time, they provide added comfort and security. ABB KNX control elements form the interface between this state-of-the-art technology and the user.</p> |
| <p>User Interfaces</p>  | <p>Lighting, heating, energy consumption, security systems: With a high-performance home control from ABB, your home responds to your wishes. Living becomes comfortable while energy efficiency and safety increase at the same time. In addition, audio, video or household appliances can also be integrated seamlessly. And with the intuitive operation of the elegant control elements from ABB, you have all areas fully under your control.</p> |
| ABB-Free@Home® | |
| <p>ABB-free@home®</p>  | <p>This recently launched solution makes smart home technology an option for the average household – making home automation easier than ever. ABB-free@home® transforms a house or apartment into an intelligent home. Whether blinds, lights, heating, air-conditioning, door communication or scenes.</p> |
| <p>ABB-free@home® Actuators</p>  | <p>Actuators for switching, dimming and control are available for ABB-free@home®. The installation of central DIN rail mounting actuators in the switch cabinet makes the installation of the sensors even easier – as only the bus line is located in the flush-mounted box. With this method, the costs for each channel can be reduced.</p> |
| <p>Miniature circuit breakers (MCBs)</p>  | <p>Miniature circuit breakers protect installations against overload and short-circuit, guaranteeing reliability and safety for operations. The System pro M compact S200 series are current limiting overcurrent protective devices. They have two different tripping mechanisms, the delayed thermal tripping mechanism for overload protection and the magnetic tripping mechanism for short circuit protection.</p> |
| <p>Residual current devices (RCDs)</p>  | <p>Residual current devices protect people and equipment from the risk of fire. We offer a comprehensive range to cover all the applications in residential, commercial and industrial segments. ABB can offer all the RCD types according to IEC international standards like RCCBs, RCBOs, RCD-blocks, Earth Leakage Relays DIN-Rail and front panels.</p> |
| <p>Surge protective devices (SPDs)</p>  | <p>The OVR range is designed to protect electrical systems and equipment against transitory surges and impulses caused by lightning and operations on the electrical grid.</p> |
| <p>Control and automation devices</p>  | <p>Control and automation devices have been designed to meet the continuous demands in both residential and commercial systems by controlling multiple loads as a function of time, brightness or temperature. ABB offers a wide range of switches to operate the electric utilities as needed to suit the requirements of a vast variety of applications. Our product ranges focus on light and heat control and support your energy saving plans by switching off non-priority loads. ABB's target is to supply the market with products that are contributing to energy management, safety, functionality and environmental protection.</p> |
| <p>Command and signaling devices</p>  | <p>Our ranges of command and signaling devices enable manual and automatic, local and remote command of loads and lines mainly in residential, commercial and industrial lighting installations and automation applications. Diverse functions such as remote control, visual status indication of machines and devices, separation between circuits, signaling of electric loads' operating status and acoustic signaling are covered by our various ranges of command and signaling devices.</p> |
| <p>Protection and safety devices</p>  | <p>Our wide portfolio of protection and safety devices is suitable for worldwide applications in residential, commercial as well as in industrial environments. It includes not only devices that protect networks against short-circuit and overcurrents such as our range of fuse holders and fuse switch disconnectors, but also products that guarantee operational continuity either by providing selective protection for all DC 24 V load circuits (EPD24) or by monitoring the insulation of IT lines both in large industrial plants and PV farms (ISL range).</p> |

| Product / Offering | Benefits and features |
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| <p>Energy efficiency devices</p>  | <p>Energy management is one of the biggest challenge in any business and application. ABB offers a wide range of energy efficiency devices and advanced metering solutions which ensure the monitoring of electricity usage, from the incoming energy all the way down to the last branch, contributing to your energy management and a reduction in energy consumption</p> |
| <p>SMISSLINE TP</p>  | <p>SMISSLINE TP is the complete line protection solution for applications with high availability, easy and fast installation and maintenance requirements. Being the world's first plug-gable socket system, SMISSLINE TP ensures that load-free devices and components can be snapped on and off under voltage without the need for additional personal protective equipment to guard against electrical hazards. That opens up completely new prospects for you when it comes to installation, operation and flexibility.</p> |
| <p>Electricity meters</p>  | <p>Managing electrical supply is a priority. Without measuring usage, it is hard to determine efficiency. Measuring an electrical installation can save effort and money. The addition of energy meters for sub-metering and a current measurement system for branch supervision enables the monitoring of energy usage, from the incoming energy all the way down to the last branch.</p> |
| Low-voltage control and protection products | |
| <p>Arc guard TVOC-2</p>  | <p>The Arc Guard System™ increases safety to personnel and equipment and minimizes downtime after an arc accident has happened. The easy-to-read interface makes reading status information quick and easy. A simple start-up menu quickens installation and setup. SIL-2 approval ensure maximum reliability.</p> |
| <p>Molded case circuit-breakers</p>  | <p>ABB's molded case circuit-breakers guarantee extremely high performance while being progressively smaller in size, simple to install and able to provide absolute protection and full connectivity. Tmax XT range consists of seven frame sizes from 160A up to 1600A.</p> |
| <p>Air circuit breakers</p>  | <p>Emax 2 all-in-one is the first circuit breaker that matches new grid requirements. It enables a direct communication to the new energy management cloud-computing platform ABB Ability™ Electrical Distribution Control System. Smart and plug and play architecture makes Emax 2 all-in-one easy to use. Leveraging also unmatched electrical performances, Emax 2 sets a new circuit-breaker benchmark for the needs of today and tomorrow.</p> |
| <p>Ekip UP</p>  | <p>Ekip UP is the product range of protection and metering relays for low voltage plants. The multifunctional units enable full metering of power quality, direct connection of switchgears to ABB Ability™ platforms, spread connectivity to supervision systems with more than 8 communication protocols, complete protections for feeders and generators plus control logics. Leveraging on plug-in current sensors, Ekip UP is also designed to upgrade existing installations in power distribution and automation. Main applications are in commercial buildings, industrial facilities, marine and solar power plants.</p> |
| <p>AC switch disconnectors</p>  | <p>The OT range of switch disconnectors from 16 to 4000A is suitable for diverse applications such as machinery, power distribution and motor control centers. Thanks to a modular design, OT switches are available in different pole configurations. Mounting is possible in any direction and a wide offering of accessories is available.</p> |
| <p>DC switch disconnectors</p>  | <p>The OTDC range of switch disconnectors from 16 to 1500A is specially designed for DC applications. OTDC switches have a compact design, high energy efficiency, and reliable breaking power at all current levels. ABB's range includes switches for installations with 1500 VDC and for simultaneous switching of up to 3 strings.</p> |
| <p>Transfer switches</p>  | <p>ABB offers a wide variety of transfer switches from 16 to 3200A, including switches for manual, remote or automatic transfer of loads from one source to another. The switches are designed to be virtually maintenance free across their entire extended lifespan and offer safe and reliable change-over performance.</p> |

| Product / Offering | Benefits and features |
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| <p data-bbox="76 286 248 315">Enclosed switches</p>  | <p data-bbox="451 286 1524 392">Our range of enclosed switches is one of the most complete in the market. Whether you need a main disconnect or a safety switch, you can always find a high quality product that suits your application. Our offering includes enclosed switch disconnectors, switch fuses and safety switches. The enclosures are available in plastic, aluminum, steel sheet, stainless steel sheet and acid-proof material.</p> |
| <p data-bbox="76 452 209 481">Cam switches</p>  | <p data-bbox="451 452 1524 535">OC and OL cam switches are suitable for even the most demanding applications. A versatile selection of handles, mounting options, and accessories make it easy to create the perfect solution. With the online configurators, Camweb and Camweb2, users can design their own cam switch with confidence.</p> |
| <p data-bbox="76 618 197 647">Switch fuses</p>  | <p data-bbox="451 618 1524 701">OS switch fuses range from 20 to 1250A and are suitable for different types of fuses: DIN, BS, NFC, J and L. OS switch fuses have a modular design and are available in different pole configurations. ABB offers ready and tested type 2 coordination tables for easy and fast selection of motor control devices.</p> |
| <p data-bbox="76 784 261 844">InLine II fuse switch disconnectors</p>  | <p data-bbox="451 784 1524 866">InLine II is the latest technology of fuse switch disconnectors to ensure the best stability and safety in the power distribution network. The degree of protection is IP30 (front) and has been designed for an easy and safe replacement of NH fuse links. InLine II supports intelligent communication.</p> |
| <p data-bbox="76 949 309 1010">EasyLine XLP fuse switch disconnectors</p>  | <p data-bbox="451 949 1524 1055">EasyLine range of fuse disconnectors ensures high protection and reliable operation in critical power applications, distribution boards, switchboards, and capacitor banks. A wide range of cable terminals and snap-on accessories make the installation easy and fast. EasyLine can be fitted into different distribution systems by means of busbar adapters.</p> |
| <p data-bbox="76 1115 252 1176">SlimLine XR switch disconnects fuse</p>  | <p data-bbox="451 1115 1524 1234">SlimLine XR meets increasing demands in the industry for safe and reliable energy distribution. Thanks to the unique contact design and compact size, the installation is safe, fast and easy. For remote operation and monitoring, SlimLine XR is available with an integrated motor, electronic fuse monitor (EFM) or the new integrated energy monitoring device ITS2.</p> |
| <p data-bbox="76 1281 258 1310">Kabeldon IP system</p>  | <p data-bbox="451 1281 1524 1480">Kabeldon IP-system for all kind of low-voltage distribution systems in substations, cable distribution cabinets and distribution boards. The busbar system (for rated currents up to 2500 A) contains many different accessories and can be equipped with different switching devices to provide distribution systems with the desired functions. The range includes connectors, disconnectors, switches, fuse-switch-disconnectors, fuse switches, etc. The switching devices can be installed and connected to the busbars in a single working operation. This modular system makes planning easy. Kabeldon IP-system is the safest system in the market; insulated and touch-proof. It is designed for an outstanding long lifetime and a minimized Total Cost of Ownership due to low maintenance costs</p> |
| <p data-bbox="76 1447 248 1507">Cable distribution cabinets</p>  | <p data-bbox="451 1447 1524 1659">in most environments. They come in various design and sizes; all are doing extremely well even under very tough conditions. Hot-dip galvanizing gives great resistance to corrosion and also parts in the excavated area are extra protected. The degree of protection is IP34D. At the same time, they satisfy current requirements for long life with undiminished safety and low operating and maintenance costs. These robust and versatile enclosures are for a variety of applications and are designed to be easily fitted in different installation environments. This modular system makes planning easy.</p> |
| <p data-bbox="76 1608 288 1637">Installation contactors</p>  | <p data-bbox="451 1608 1524 1816">ESB installation contactors offer a complete portfolio (from 16 to 100 A) and are mainly used for switching and controlling lighting, heating, ventilation, motors and pumps. They are suitable for use in several different conditions and environments, designed to match ABB modular DIN-Rail components and can be easily integrated in dedicated panels. EN contactors also have a built-in toggle switch for automatic and manual application. Tool-free auxiliary contact blocks are available for the complete range.</p> |
| <p data-bbox="76 1769 240 1830">Measuring and monitoring relays</p>  | <p data-bbox="451 1769 1524 1973">ABB offers all the important measuring and monitoring relays required for a wide range of applications, all electrical key parameters of single- and three-phase networks can be monitored. Further products offer reliable temperature measurement and help to protect motors and other equipment. Liquid level monitors ensure accuracy in filling and draining applications. Reliable protection of assets and preventing unplanned downtime is ensured by choosing from this large range of high quality multi-function or single-function products.</p> |

| Product / Offering | Benefits and features |
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| <p>Grid feeding monitoring relays</p>  | <p>The multifunctional CM-UFD grid feeding monitoring relays provide different monitoring functions in accordance with local standards and detect over- and undervoltage as well as any changes in grid frequency. The device is connected between the distributed generation and the public grid in order to disconnect the distributed generation in case of problems (e.g. unstable grid), faults or maintenance on the grid. Additionally, monitoring of ROCOF (rate of change of frequency) can be configured.</p> |
| <p>Interface relays and optocouplers</p>  | <p>ABB's interface relays and optocouplers can be used for switching both AC and/or DC loads. They ensure a reliable voltage conversion between process peripherals and higher level control systems. They provide electrical isolation for sensitive electronics such as PLCs and are also suitable for an assortment of machinery. Available in a range of different coil voltages, and compatible plug-in function modules, ABB's interface relay and optocoupler portfolio is suitable for many different applications. This wide variety of pluggable interface relays can be equipped with standard or logical sockets.</p> |
| <p>Time relays</p>  | <p>The time relays of the CT range have been used in applications worldwide and have proven their excellent functionality in daily use, even under the toughest conditions. Four ranges of time relays provide timing functions for all applications. ABB ensures all low voltage timing control needs are met with our wide variety of product options—from economic to highly sophisticated, providing maximum value.</p> |
| <p>Primary switch mode power supplies</p>  | <p>The CP range offers the latest technology in a compact construction of power supplies. Modern power supply units are a vital component in most areas of energy management and automation technology. ABB pays the utmost attention to the resulting requirements. Innovation is the key to a substantial enlargement of our power supply product program.</p> |
| <p>Manual motor starters</p>  | <p>Manual motor starters, are electromechanical protection devices for the main circuit. They are mainly used to switch motors ON/OFF manually and to provide fuseless protection against short-circuit, overload and phase failures. Fuseless protection saves costs, space and ensures a quick reaction under short-circuit condition by switching the motor off within milliseconds. Starter combinations are setup together with contactors and are available with screw or Push-in Spring terminals.</p> |
| <p>Circuit breaker for transformer protection</p>  | <p>Circuit breakers for transformer protection are specially designed for fuse-less protection on the primary side of control transformers against overloads and short-circuits. It also allows the transformer to connect and disconnect manually from the mains. At start-up, transformers generate very high peak currents (inrush currents) so regular protection is often not enough. Where transformer must be appropriately protected, ABB's new MS132-T is the ideal solution.</p> |
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| <p>3-pole contactors and overload relays for motor starting and power switching</p>  | <p>ABB 3-pole contactors offer an exhaustive selection of products for simple and extreme applications. AF contactor technology revolutionizes how we use contactors and enables functionality in all parts of the world and in a variety of network conditions. Furthermore, the mini-contactor range offers compact dimensions and specific connection possibilities. You can choose terminals between screw, Push-in-Spring and ring tongue through our ranges. So whatever your need of contactor might be, ABB will have a variant meeting just that.</p> |
| <p>4-pole contactors for power switching</p>  | <p>ABB's AF 4-pole contactor range is a complement to the family of 3-pole AF contactors and motor protection equipment. Unmatched performance in a variety of applications and environments has made the AF contactors well appreciated by customers throughout the world. You can also benefit from the compactness of the 4-pole mini contactors available with 3 connection types.</p> |
| <p>Electronic compact starter</p>  | <p>Electronic compact starters are innovative hybrid starters. Direct-on-line, reversed starting, motor overload protection and emergency stop are all fully integrated. ABB's HF range combines 30 million electrical switching cycles and a wide array of functions in a compact housing only 22.5 mm wide. The HF9-ROL-24VDC includes direct-on-line and reversed starting as well as motor overload protection up to 3kW/400 V AC in just one device. For emergency stop applications ABB's safety range HF9-ROLE-24 V DC adds SIL 3, PL e and ATEX certification on top.</p> |
| <p>Contactors for capacitor switching</p>  | <p>UA..RA 3-pole contactors for capacitor switching, can be used in installations with very high current peak at capacitor energization. The contactors are delivered complete with their damping resistors and must be used without additional inductances.</p> |

| Product / Offering | Benefits and features |
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| <p>Contactor for DC switching</p>  | <p>The GAF contactors are rated for DC-1 or DC general purpose applications according to IEC 1000 V DC or UL 600 V DC.</p> |
| <p>Enclosed direct-on-line starter</p>  | <p>DRAF is an enclosed direct-on-line starter embedding AF technology. It is used for motor starting up to 7, 5 kW and 10 hp and complies with both IEC and UL/CSA standards. TF42 thermal overload relays for motor protection should be selected separately according to motor's nominal current.</p> |
| <p>Limit switches</p>  | <p>Our limit switches product range combines different types of actuators, casings and contacts to covers most applications as they are IP67 designed to operate in the most difficult environments. They will secure installation and uptime.</p> |
| <p>Universal Motor Controller</p>  | <p>The intelligent ABB universal motor controller UMC100.3 combines motor protection and control functions, fieldbus and Ethernet communication, as well as fault diagnosis in just one device. It provides detailed operational, diagnostic and service data continuously, providing an effective data source for modern predictive maintenance systems in any plant. The device can be easily expanded when needed- for example with analog and temperature inputs, voltage measurement or digital inputs and outputs. Due to its flexible configuration options, the engineering effort can be significantly reduced and the number of modifications to a project limited to a minimum.</p> |
| <p>Pilot devices</p>  | <p>Our products are engineered for total reliability. Their innovative design implify the entire process, from selection to installation.</p> <ul style="list-style-type: none"> • Modular range for flexible solutions with high electrical ratings • Compact range with all-in-on design reducing installation time and cost. |
| <p>Softstarters</p> | |
| <p>PSR - The compact range</p>  | <p>PSR is our most compact softstarter with essential benefits and values like reducing mechanical wear and tear and less stress on the electrical network. The bypass is built-in and verified by ABB. PSR can handle up to 100 starts per hour. Suitable for small motors. Current range 3-105 A with the primary voltage of 208-600 V and control supply voltage 100-240 V AC or 24 V AC/DC.</p> |
| <p>PSRC - For scroll compressor</p>  | <p>PSRC is fast and easy to install with fixed settings. Designed for scroll compressors results in less stress on the compressor reducing the maintenance cost to a minimum. The bypass is built-in and verified by ABB. Current range 3-105 A with the primary voltage of 208-600 V and control supply voltage 100-240 V AC.</p> |
| <p>PSE - The efficient range</p>  | <p>The new generation PSE is a true general-purpose softstarter. It's a perfect balance between high starting capacity, cost-efficiency, and built-in motor protections. It is now featuring built-in Fieldbus communication. A compact design with the bypass is built-in and verified by ABB. Torque control for eliminating water hammering in pipe systems. Current range 18-370 A with the primary voltage of 208-600 V and control supply voltage 100-250 V AC.</p> |
| <p>PSTX - The advanced range</p>  | <p>PSTX is a complete alternative for any motor starting application. It is featuring built-in Modbus and anybus modules that support all major communication protocols. With complete motor protection in only one unit and can handle both load and network irregularities. PT-100, earth fault protection, and over/ under voltage protection, and much more. PSTX also has many applications enhancing features, including torque control: the most efficient way to start and stop pumps. The pump cleaning feature can reverse pump flow and clean out pipes, securing your pump system's uptime. Current range 30-1250 A (inside delta 2160 A) with the primary voltage of 208-600 V or 208-690 V and control supply voltage 100-250 V AC.</p> |
| <p>Safety products</p> | |
| <p>Programmable safety controllers and safety relays</p>  | <p>ABB offers safety controllers and safety relays for different size and complexity of achines. The Pluto programmable safety controller is powerful, cost effective and flexible with advanced features such as speed monitoring, analogue inputs, AS-i and arithmetic functions. The Sentry safety relays are easy to install and trouble shoot with features such as powerful outputs, switch for manual/automatic reset and an integrated display.</p> |

| Product / Offering | Benefits and features |
|---|---|
| <p data-bbox="76 282 284 315">Optical safety devices</p>  | <p data-bbox="451 282 1525 443">Optical safety devices are used to detect persons or objects entering a dangerous area. ABB offers a full range of light curtains and light grids. Integrated muting and local reset reduce the complexity, while alignment help, M12 connectors and a wide range of accessories speed up installation. In order to reduce downtime there is easy diagnostics with extensive indication, protection of mutual interference with coding and protection against harsh environment with protective tubes and lens shields.</p> |
| <p data-bbox="76 454 319 488">Safety switches and locks</p>  | <p data-bbox="451 454 1525 616">ABB has a full range of safety switches and locks used to control the gates and hatches around hazardous machinery, and to monitor the position of a machine. The Eden non-contact safety sensor has the highest safety level, IP69K and temperature tolerances of -40 to +70 degrees C which makes it suitable for harsh environments.</p> |
| <p data-bbox="76 627 284 660">Safety control devices</p>  | <p data-bbox="451 627 1525 660">We offer ergonomic and reliable control devices that enable safe control of machinery.</p> |
| <p data-bbox="76 799 239 833">Emergency stops</p>  | <p data-bbox="451 799 1525 960">An emergency stop device is used to permit anyone to stop machinery if it breaks down or if someone is in danger. We offer different types of traditional mushroom head type emergency stops for different types of mounting and environments. We also offer pull wire emergency stop switches that allow emergency command from any point along the installed wire length.</p> |
| <p data-bbox="76 972 319 1005">Pressure sensitive devices</p>  | <p data-bbox="451 972 1525 1039">ABB offers pressure sensitive safety mats, safety edges and safety bumpers of different sizes to be used in safety applications to detect persons.</p> |
| <p data-bbox="76 1144 231 1178">Fencing systems</p>  | <p data-bbox="451 1144 1525 1305">Quick-Guard is a very flexible fencing system for machine enclosure. It consists of a minimum of different components, such as aluminum profiles, patented assembly parts, net-locks, mesh, solid panels or noise reduction panels. Thanks to our patented screw-lock system, we can supply all brackets pre-mounted with fixing screws and nuts. No holes need to be drilled in the profiles and all cuts are made straight. Assembly and modification is therefore very easy. Quick-Guard can be supplied to be designed on site (Quick-Guard Express) or designed and cut according to drawing (Quick-Guard Standard).</p> |
| Enclosures | |
| <p data-bbox="76 1361 199 1395">System pro E</p>  | <p data-bbox="451 1361 1525 1429">ABB enclosures are ideal for single family houses, multiple dwellings, commercial buildings, infrastructures and industrial applications in compliance with international standards and community norms.</p> |
| Consumer units | |
| <p data-bbox="76 1579 279 1612">System pro E comfort</p>  | <p data-bbox="451 1579 1525 1740">System pro E comfort is ABB's series of consumer units where versatility and performance are combined with an elegant design. Designed to reduce cabling times, as well as allowing the total integration of several kinds of devices for DIN-Rail or to be installed on a mounting plate or on blind front panels. The wide range of sizes and versions makes System pro E comfort one of the most complete ranges of consumer units to complete BB's offer for protection, control and monitoring.</p> |
| Sub distribution boards | |
| <p data-bbox="76 1796 279 1830">System pro E energy – Compact Distribution</p>  | <p data-bbox="451 1796 1525 1957">The compact distribution boards, stand out due to it flexibility and build-up speed which will support the users in their daily tasks. Be it for commercial, industrial or domestic uses – this broad range of products offers a solution to any type of mounting – from flush-mounting and wall-mounting up to hollow-wall mounting applications. Depending on the version (Distribution/small automation/media board), degrees of protection between IP31 and IP43, flush and wall, all are available.</p> |
| <p data-bbox="76 1968 367 2002">System pro E energy – TwinLine</p>  | <p data-bbox="451 1968 1525 2119">With the TwinLine system, another benchmark in the field of modern power distribution is set. TwinLine can be delivered as a welded system, TwinLine N 55 (IP55) and as flatpack system, TwinLine S 43 (IP43). All have been tested according to IEC 61439 and DIN EN 61439 Parts 1, 2 and 3. Continuity is the guiding principle for these new wall-mounted and stand-alone cabinets for distribution board assembly – from their high degree of protection, to their ease of installation, to a portfolio that can meet all requirements in the field. Systems intelligence comes as standard with TwinLine because in combination with System pro E combi – CombiLine modules, TwinLine offers unlimited possibilities for the internal configuration.</p> |

| Product / Offering | Benefits and features |
|--|--|
| Interior fittings | |
| <p data-bbox="76 322 443 369">System pro E combi – CombiLine</p>  | <p data-bbox="451 322 1511 504">CombiLine is a the simple, quick and safe modular distribution panel system for all sub-distribution cabinets up to 850 A. Its sophisticated quick mounting system, makes completion of modular distribution panels an effortless process. CombiLine modules are available with plastic covers (CombiLin N) and will fit the Compact Distribution enclosures as well as the TwinLine N 55 range, CombiLine S, with its metal covers will fit the new TwinLine S range of enclosures. CombiLine Modules can be delivered as completely pre-assembled (with or without components), as single loose parts or flatpack. Thanks to the customer feedbacks, CombiLine is undergone to a continuous enhancement and range extention, to suit every application in electrical distribution.</p> |
| Control and automation boards | |
| <p data-bbox="76 560 443 589">System pro E control</p>  | <p data-bbox="451 560 1511 741">System pro E control is ABB's range of metal structures for industrial automation and controlgear switchboards that conforms to several international standard such as the IEC 62208 and to the new IEC 61439-1-2. The structures IS2 are also seismic-proof according the IEEE Std 693 and tested against vibrations. Their high mechanical performances, the sturdiness and the loading capacity are the market benchmark and allow installation on-board machines, in production lines, motor control center and in every typical 19" Rack applications. Furthermore, the new range of System pro E control made in stainless steel AISI304 is perfect for outdoor and for environments where high level of hygiene is required.</p> |
| <p data-bbox="76 757 443 786">System pro E control – GEMINI</p>  | <p data-bbox="451 757 1511 913">GEMINI are thermoplastic enclosures made through co-injection technology guaranteeing the highest level of mechanical protection against impacts (IK10) without the need to add hardening substances (fiber glass). Gemini keeps its mechanical characteristics in the long term and thanks to IP66 rating and to the high UV resistance, it's perfect for any outdoor use and PV/solar applications. GEMINI can easilly host DIN rail devices (up to 216 poles), Tmax (up to T5) and Tmax XT MCCBs. A new GEMINI version, UL listed, is available.</p> |
| Distribution boards | |
| <p data-bbox="76 969 443 999">System pro E power</p>  | <p data-bbox="451 969 1511 1126">System pro E power is ABB's solution for main distribution switchgears. Meets all plant requirements depending on the type of installation, required degree of protection, and the electrical and mechanical specifications. ABB provides complete solutions for main electric power distribution in infrastructure and industries in accordance with the regulatory framework. In addition, System pro E power guarantees full compatibility with all other ABB products.</p> |
| <p data-bbox="76 1160 443 1189">Outdoor distribution boards</p>  | <p data-bbox="451 1160 1511 1317">Kabeldon distribution boards are used in several applications such as: utilities, buildings, construction sites, industries, railways and communication systems. Kabeldon low voltage distribution boards feature small dimensions, flexibility, safety, reliability and a clear layout. To ensure high quality, the enclosure is assembled at the factory. The enclosure is then fitted with the required devices. It is a simple matter to wire up the distribution board and put it into service.</p> |
| <p data-bbox="76 1350 443 1397">DC String combiners boxes (plug-and-play)</p>  | <p data-bbox="451 1350 1511 1507">ABB has developed, using Gemini and EUROPA65 PV enclosures, a family of prewired and certified String combiners boxes to meet the needs of any plant types: from single string installation in residential applications to large-scale solar fields. The whole range is ready to be connected to the solar electrical installation (plug and play) and is available with a high level of customization.</p> |
| Low-voltage ANSI GIS switchgear | |
| <p data-bbox="76 1585 443 1615">ReliaGear® SafeT™ Panelboard</p>  | <p data-bbox="451 1585 1511 1765">Built around an industry exclusive finger-safe IP20 bus stack with plug-on branch devices, the SafeT Panelboard is the new benchmark for safety and ease of use. Coupled with ABB's Tmax molded case circuit breakers, the SafeT Panelboard provides complete protection and versatility for any application. Tmax XT breakers allow up to 42% higher breaker density than competitors—reducing panel enclosure size and saving wall space. Innovative labor saving enclosure eases installation and maintenance with features like hinged dead front, while field reversible interiors make job site corrections easy. Bus ratings from 400 A to 1200 A; breakers available from 15 A to 1200 A; UL, CSA certifications.</p> |
| <p data-bbox="76 1787 443 1856">MNS-Motor Control Center (MCC) - low voltage motor control center for ANSI/NEMA/UL</p>  | <p data-bbox="451 1787 1511 1955">Expert service that covers all requirements from installation and commissioning to circuit breaker retrofits and complete switchgear replacement. The portfolio supports both ABB and 3rd party manufactured switchgear to enhance and support the complete life of the installed asset with correct spare parts, maintenance, upgrades and retrofits all of which can be bundled together into bespoke, comprehensive service support agreements.</p> |
| <p data-bbox="76 1977 443 2047">MNS-SG - metal enclosed low-voltage power circuit breaker switchgear for ANSI/NEMA/UL</p>  | <p data-bbox="451 1977 1511 2150">Modularity of both electrical and mechanical design offers excellent flexibility and enables customization of the structural design, interior arrangement and degree of protection. The switchgear can be outfitted as needed with standardized components to perfectly adapt the MNS-SG to each application. MNS-SG was designed, built and tested to meet all applicable requirements for UL1558, ANSI C37.20.1 and ANSI C37.20.7. Up to 480V at 100kA and 85kA at 600V; up to 5000A main and vertical bus ANSI Type 2B accessibility to protect personnel when the low voltage instrument compartment door is open. Emax 100% rated UL 1066 circuit breakers; optional plenum contains exhaust pressure and gas and channels them to a designated safe area.</p> |

Product / Offering**Benefits and features**

Low-voltage switchgear, distribution and MCC - ABB MNS

MNS Digital low-voltage switchgear and motor control center (IEC)



MNS Digital switchgear and motor control solution is fully based on MNS low-voltage switchgear design and is ABB's global solution for digital power distribution and motor control center up to 690V / up to 6300A / up to 100kA. With options for fixed, plug-in and withdrawable breakers and modules and top or bottom power cable and bus duct connections, rear or top bus bars, it offers unrivalled flexibility. The product is fully arc-proof as per IEC 61641 criteria 1 to 7. Arc tests for MNS even exceed the standard thus setting the global benchmark for best in class safety for operator and equipment safety. The product offers wide-ranging protection and control functions; flexibility during design stage; the best plant information through enhanced measurement functions; and application of industry standard communications for control monitoring integration including ABB Ability solution.

The product offers wide-ranging protection and control functions; flexibility during design stage; Industry 4.0 ready with the best plant information through ABB Ability™ solution such as local ABB Ability™ Condition Monitoring and remote cloud application ABB Ability™ MyRemoteCare; open communication with the application of industry standard Ethernet and serial communications for control system integration.

Main benefits:

- Unmatched safety for protection of personnel and plant, tested as per IEC 61641 criteria 1 to 7 Ed.3, all operations with closed doors
- Reduced operational expenditure due to maintenance free bus bar design and options such as withdrawable or plug-in technology
- Temperature monitoring option available to reduce need for manual monitoring
- Increased availability with withdrawable design and plug-in technology option
- Reliable, flexible and scalable offering integration of various electrical devices and applications such as power factor compensation, SlimLine etc.
- Space saving design with bus bar at rear or on top, cable connection at rear or from front, offering further optimization through compact and fixed design
- Integrated protection and communication solutions from ABB such as ACB Emax 2, MCCB Tmax XT supporting IEC61850 communication
- Application of ABB's leading motor control and protection solution as well variable speed drives, soft starter etc.
- Supporting leading process communication Profibus, Profinet, Modbus and Modbus TCP

MNS iS integrated low-voltage switchgear and motor control center (IEC)



MNS iS switchgear and motor control center solution is the first truly digital global switchgear design and fully based on MNS low-voltage switchgear up to 690V / up to 6300A / up to 100kA. The design of MNS iS incorporated fully segregated power and control cable compartment for independent access. The withdrawable units are incorporated equipped with the smart sensor technology for measuring current, voltage and contact temperature. Control and protection components, installed separately from electrical circuits, are connected to the data concentrator that collects all switchgear and starter/feeder information and distributes right information to process control and ABB Ability™ Condition Monitoring. This means process related information is sent to process operator and electrical oriented information to electrical operator in real time. Information to electrical operator is based on focus for condition based and predictive maintenance so that the plant electrical staff can operate the switchgear with ease and can maintain the switchgear in top condition- tackling the day to day situation proactively.

The product offers wide-ranging protection and control functions; flexibility during design stage; Industry 4.0 ready with the best plant information through ABB Ability™ solution such as local ABB Ability™ Condition Monitoring and remote cloud ABB Ability applications; open communication with the application of industry standard Ethernet and serial communications for control system integration.

Main benefits:

- Unmatched safety for the protection of personnel and plant due to unique design of separation of power and control, fully tested as per IEC 61641 with exceeding requirements as per ABB
- Reliable, flexible and scalable solution using standardized module design
- Temperature monitoring integrated by design
- Easy to and fast to maintain without re-programming the replaced devices
- Reduced footprint due to the most compact module size
- Increased plant availability through ABB Ability™ solution

Low-voltage service and support



Expert service that covers all requirements from installation and commissioning to circuit breaker retrofits and complete switchgear replacement. The portfolio supports both ABB and 3rd party manufactured switchgear to enhance and support the complete life of the installed asset with correct spare parts, maintenance, upgrades and retrofits all of which can be bundled together into bespoke, comprehensive service support agreements.

With a global installed base and domain expertise, our service products and services improve the operational efficiency, reliability and performance of your systems and equipment across the complete lifecycle, thanks to replacement and retrofit solutions. ABB offers Support Centers providing 24/7 phone response and online support, asset management with onsite condition monitoring and remote monitoring and predictive maintenance solutions based on ABB Ability™ portfolio, and the availability of spare parts for the latest or legacy low voltage equipment

Please note: This is ABB's global offering and some products might not be available in your country. Refer to abb.com for your location.

| Product / Offering | Benefits and features |
|--------------------|-----------------------|
|--------------------|-----------------------|

Monitoring, communications and accessories

ABB's solar inverter solutions are complemented with control and monitoring solutions based on decades of knowledge and practical experience in vast variety of applications.

Accessories

VSN300 WIFI Logger card



- The Wi-Fi Certified™ mark assures interoperability, security, easy installation and reliability
- Local, remote monitoring in one solution
- SunSpec certified Modbus mapping for easy integration
- Secured and encrypted data transfer to Aurora Vision® Plant Management Platform
- Modbus TCP server for SCADA integration
- Easily installed on new and existing UNO and TRIO string inverters

VSN700 Data Logger



- Data management system with serial and Ethernet ports for data and event logging
- Quick installation and fast plug-n-play commissioning with device discovery mechanism
- Network Provisioning with dynamic IP addressing (DHCP client and server)
- Reliable and secure transmission of operational data to Aurora Vision® Plant Management Platform
- Remote configuration and management capabilities, including firmware upgrades over the Internet using Plant Portfolio Manager

VSN800 Weather Station



- Automatically monitors site meteorological conditions and photovoltaic panel temperature in real-time, transmitting sensor measurements to the data center
- Shipped preconfigured and ready for installation, requiring no special tools.
- The advanced sensor set improves monitoring of weather conditions that can effect energy production.

Monitoring accessories



PVI-PMU

- Allows active and reactive power control according to EEG-2009§6 and BDEW
- Offers 4 digital inputs and 2 analog inputs for active and reactive power control
- Capable to control up to 32 Inverters or 55 kW modules



PVI-RS485-Modbus

- Protocol converter from Aurora proprietary protocol to Modbus RTU or Modbus TCP
- Up to 32 inverters or 55 kW modules connected
- Multi-drop bus connection allowed for RTU
- No active-reactive power control in Modbus RTU



PVI-USB-RS232_485

- Allows serial interfacing between photovoltaic inverters and computer via RS485 link
- Works with centralized and string inverters
- No power supply needed (auto-supplied via USB port)

UPS

| Product / Offering | Benefits and features | Suggested applications |
|--------------------|-----------------------|------------------------|
|--------------------|-----------------------|------------------------|

ABB's power protection portfolio is a unique line up of UPS products, designed to solve power quality issues for commercial and industrial applications.

Modular UPS

DPA UPScale ST (10 kW–200 kW; in parallel up to 400 kW)



DPA UPScale ST is available for high density applications requiring an all-in-one power protection solution that includes frame, UPS, battery and communications. This fully scalable and easily maintained UPS gives you unparalleled uptime and energy efficiency.

A variety of small- to mediumsized sized system architectures and continuously growing infrastructures

DPA 250 S4 (50 kW - 300 kW; in parallel up to 1.5 MW)



The DPA 250 S4 has a high-efficiency, modular architecture that offers best reliability for environmentally conscious organizations that also need zero downtime and low cost of ownership. Thanks to three-level interleaved technology, the DPA 250 S4 achieves an efficiency of 97.6 percent UPS module efficiency and 97.4 percent system efficiency.

Modular UPS for medium-sized critical applications

| Product / Offering | Benefits and features | Suggested applications |
|--|---|---|
| <p>DPA 500 (100 kW–500 kW; in parallel up to 3 MW)</p>  | <p>The modular online double-conversion UPS delivers power protection from 100 to 500 kW in a single cabinet (vertical scalability). Cabinets can operate in parallel configuration to build a system of up to 3 MW (horizontal scalability).</p> | <p>A variety of medium-sized and large data centers or other IT facilities</p> |
| <p>DPA 60 208V UL - Modular UPS 20kW–60kW</p>  | <p>The DPA 60 UL is an energy-efficient modular UPS optimized to deliver power protection from 20kW–60kW at 208V with internal batteries in a single cabinet. Horizontal scalability is also available, with up to five cabinets in parallel, to increase total power up to 300kW. The DPA 60, integrates DPA technology at its core, ensuring maximum flexibility, redundancy and scalability for the standardization of power protection.</p> | <p>Modular UPS for small and medium-sized data centers, server rooms and other IT applications for the UL marketplace.</p> |
| <p>Conceptpower DPA 120 208V UL - Modular UPS 20kW–600kW</p>  | <p>The Conceptpower DPA 120 delivers power protection from 20kW to 120kW at 208V (one to six modules) in a single cabinet frame. Horizontal scalability is also given, with up to five frames in parallel, to increase total power up to 600kW. This scalability means that there is no need to over-specify the original configuration as power modules can simply be added, as needed, in the future.</p> | <p>Modular UPS for small and medium-sized data centers, server rooms and other IT applications</p> |
| <p>MegaFlex DPA IEC</p>  | <p>The on-line double conversion MegaFlex DPA UPS provides the best power protection for your critical infrastructure from 250 kW to 1,500 kW. The modular UPS is based on ABB's decentralized parallel architecture (DPA™). This innovative system means every UPS module is practically its own UPS with all the essential functional units needed for independent operation. The MegaFlex DPA UPS solution combines the highest efficiency ratings available with the smallest footprint.</p> | <p>The MegaFlex DPA IEC is designed for critical high-density computing environments across private and public enterprise, as well as data centers for colocation, hosting cloud and telecommunications.</p> |
| <p>MegaFlex UL</p>  | <p>The MegaFlex UL UPS represents the latest technological innovation in the market delivering the best and most reliable power protection for large infrastructures. The UPS is a three-phase, 480V double conversion uninterruptible power supply. Its topology is monolithic based utilizing 400 kW power modules with power availability from 1,200 to 1,600 kW in one UPS cabinet configuration. MegaFlex UL is flexible system architecture ready and supports N+1, 2N, 2N+1, N+N, 3N/2, and catcher system configurations.</p> | <p>The MegaFlex UL is designed for critical high-density computing environments across private and public enterprise, as well as data centers for colocation, hosting cloud and telecommunications.</p> |
| <p>PowerLine DPA 20 -120 kVA (3ph); 20 - 80 kVA (1ph)</p>  | <p>PowerLine DPA is an online double conversion UPS and makes the advantages of ABB's unique modular UPS architecture available for industrial applications. PowerLine DPA is based on ABB's Decentralized Parallel Architecture (DPA) that ensures the very best UPS design in terms of availability, serviceability, safety and ease of use.</p> | <p>Its robust design is suitable for industrial plant environments that have a variety of temperatures, dust, moisture and corrosive contaminants</p> |
| <p>PCS120 MV UPS Medium Voltage UPS (2.25 MVA – 22.5 MVA (hard parallel))</p>  | <p>ABB's PCS120 MV UPS is the next generation of medium voltage UPS intended for multi megawatt power protection. Based on ZISC architecture, the PCS120 MV UPS introduces a flexible solution for higher reliability and higher efficiency in critical power facilities.</p> <p>Leading efficiency for line-interactive UPS - 98% at 50% to 100% loading. Performance in line with IEC62040-3 Class 1. System energy storage reserve available for grid support services.</p> | <p>Suggested applications: The transition from low voltage (LV) to medium voltage (MV) level is a natural progression of power protection for large critical power installations. The approach offers two main benefits. It increases reliability and reduces costs of the critical power facility build and operation. In Hyperscale Data Centers or Industrial Installations, the power protection at the MV level provides the most efficient configuration. The lower currents at this voltage level result in smaller cables and lower losses.</p> |

| Product / Offering | Benefits and features | Suggested applications |
|--|---|--|
| Standalone UPS | | |
| PowerValue 11LI Up / Pro  | The PowerValue 11LI Up and PowerValue 11LI Pro deliver top-quality protection and automatic voltage correction for lower-power operations. Both UPSs share many features: As well as intervening within 2 to 6 ms to provide power when the mains is lost, they also filter out input power disturbances such as surges, line noise or harmonics. | The line-interactive PowerValue 11LI Up is the ideal UPS for modest IT applications. The PowerValue 11LI Pro is suitable for applications such as server rooms in offices, network cabinets, workstation clusters, domestic networks and network-attached data storage arrays. |
| PowerValue 11T G2  | ABB's PowerValue 11T G2 is a single-phase, online double conversion UPS that guarantees up to 10 kW per single unit of clean, reliable power for your critical power applications. As well as maintaining power to your critical applications, the PowerValue 11T G2 also conditions incoming power to eliminate spikes, swells, sags, noise and harmonics. | Server room, advertising displays, turnstiles, lab equipment, transportation signaling systems, ATM or vending machine |
| PowerValue 11RT G2 (1 kW–10 kW, in parallel up to 30 kW)  | ABB's PowerValue 11RT G2 is a double-conversion online UPS that guarantees up to 10 kVA of clean, reliable power for your critical single-phase applications. The PowerValue 11RT G2 can be used as a standalone UPS device or installed into a standard "19 rack configuration. | Power to servers, point-of-sale terminals, workstation clusters, routers, switches, hubs and sensitive electronic equipment |
| PowerValue 11/31 T (10 kVA–20 kVA, in parallel up to 80 kVA)  | The PowerValue 11 / 31 T UPS delivers reliable power, low running costs, long battery life, easy maintenance and high levels of flexibility. The UPS features doubleconversion and voltage and frequency independent (VFI) topology. | Power to servers, point-of-sale terminals, workstation clusters, routers, switches, hubs and sensitive electronic equipment |
| PowerScale (10 kVA–50 kVA; in parallel up to 1 MVA)  | PowerScale is an online, double-conversion UPS that provides enhanced power protection in a compact format. Its outstanding price / performance delivers the best value with uncompromised system reliability and power availability. | The standalone three-phase UPS system is the ideal solution for server rooms, networks, small data centers and storage |
| PowerWave 33 (60 kW–500 kW; in parallel up to 5 MW)  | PowerWave 33, an online double-conversion UPS, is available over a model range of 60 kW to 500 kW and can be configured to operate as a single, standalone UPS or as a multi-cabinet UPS system with up to ten UPS connected in parallel. | Network-critical infrastructures such as data centers and process control environments |
| TLE Series IEC 200 – 400 kW  | The TLE Series UPS provides industry-leading reliability and efficiency, as well as clean power and unity power factor at the output. Reliability can be further increased by using ABB's unique RPA™ (redundant parallel architecture) technology to operate multiple units in parallel. Throughout their entire life cycle, all ABB UPS systems are fully supported by teams that provide training, application expertise and 24/7 preventive and corrective service. | Power protection for a wide range of power requirements and critical applications |
| TLE UL 160 – 1000 kW  | For UL applications, this TLE Series UPS provides industry-leading reliability and efficiency, as well as clean power and unity power factor at the output. Reliability can be further increased by using ABB's unique RPA™ (redundant parallel architecture) technology to operate multiple units in parallel. Throughout their entire life cycle, all ABB UPS systems are fully supported by teams that provide training, application expertise and 24/7 preventive and corrective service. | Power protection for a wide range of power requirements and critical applications |

| Product / Offering | Benefits and features | Suggested applications |
|---|---|---|
| SG Series IEC 10 – 500 kVA  | This true online double conversion UPS exploits its network integration software and communication connectivity to provide comprehensive, easy-to-integrate power protection for almost any IT environment. The SG Series operates in VFI (voltage frequency independent) mode, which maximizes load protection at any time. Instead of standard filters, the UPS runs an innovative control algorithm on the IGBT rectifier to | Power protection for a wide range of power requirements and critical applications |
| PCS100 UPS-I Industrial UPS (150 kVA –3000 kVA)  | The PCS100 UPS-I is a high performance, high efficiency UPS system that ensures protection from power quality events, such as deep sags or short-term outages, enabling continuous power supply to modern industrial processes. | Suggested applications: The UPS-I is suitable for a wide range of critical applications. These include some of the following industries: Food and beverage, manufacturing, hotels and resorts in countries where electrical infrastructure is poor. |

Power switching and distribution products

| Product / Offering | Benefits and features | Suggested applications |
|--|--|--|
| Static Transfer Switches | | |
| Cyberex SuperSwitch4 200 – 4000A UL  | The SuperSwitch4 (SS4) can transfer power between any two sources of power, including any combination of utility, UPS and generators via a break-before-make transfer to ensure continuity to critical loads. For applications with downstream magnetics, the Real Time Flux Control for Dynamic Inrush Restraint transfer algorithm ensures emergency transfers can be conducted in under 16ms while limiting potential inrush currents to <1.2x, regardless of phase difference between the sources. | Small to large data centers or other IT facilities |
| Power Distribution Units | | |
| TruFit PDU 50 – 300kVA UL  | The TruFit PDU is a 3-phase standalone power distribution unit designed to provide an unmatched combination of power density, safety, and sustainability. The compartmentalized design for the TruFit provides isolation of serviceable components from high voltages and requires only front access for installation, operation, and maintenance, thus ensuring easier fit into the white space. The TruFit is also equipped with the PowerView monitoring system that combines the features and functionalities of a traditional power quality meter with optional integrated thermal monitoring to provide a more holistic view of your system's fitness. | Small to large data centers or other IT facilities |

Please note: This is ABB's PDU and STS global offering and not all configurations are available in your country. Refer to abb.com/ups for product details.

Power conditioning and power conversion products

| Product / Offering | Benefits and features |
|--|---|
| PCS100 AVC-40 Active Voltage Conditioner for sag correction (150 kVA - 3.6MVA)  | The PCS100 AVC-40 is a high performance power electronic system designed for industrial and large commercial applications. It responds instantly to power quality events, quickly correcting voltage sags and surges, providing clean, continuous power without using an energy storage. |
| PCS100 AVC-20 Active Voltage Conditioner for voltage regulation (250 kVA -3 MVA)  | The PCS100 AVC-20 is a power protection system designed for use in industrial and large commercial operations in environments where an unstable network or utility voltage affects productivity. The system ensures a continual, regulated supply of utility voltage where the electric infrastructure is stressed, unstable or unreliable. |

| Product / Offering | Benefits and features |
|--|--|
| <p>PCS100 RPC</p>  | <p>The PCS100 RPC is a Reactive Power Conditioner designed to solve problems with power factor, voltage imbalance, inrush generated sags and harmonics. The system as such is a high performance power electronic device that responds instantly to power quality events while providing continuous reactive power correction. Due to its state of the art inverter technology the compensation is step-less which minimizes disturbances and ensures seamless ideal power quality</p> |
| <p>PCS100 ESS</p>  | <p>ABB's PCS100 ESS converter is a grid connect interface for energy storage systems that allows energy to be stored or accessed exactly when it is required. Able to connect to any battery type or energy storage medium, the PCS100 ESS brings together decades of grid inter-connection experience and leadership in power conversion to provide seamless system integration and battery control.</p> |
| <p>PCS100 SFC</p>  | <p>The PCS100 Static Frequency Converter is the ideal solution for addressing change of frequency, it takes the standard grid supply and converts it to the desired frequency and voltage using static technology meaning there are no large moving masses. The SFC is highly configurable for different size options from 125kVA up to 2MVA, even larger systems are possible as multiple units can be paralleled if required.</p> |

Medium-voltage

| Product / Offering | Benefits and features |
|---|--|
| <p>ABB offers a wide range of medium-voltage products to the Distributor channel, including distribution automation relays, instrument transformers and sensors, fuses and switches, outdoor apparatus, secondary switchgear and service. These products and solutions are used in many applications such as utilities, renewables, building & infrastructure and transportation.</p> | |
| <p>Distribution solutions</p> | |
| <p>Arc protection devices REA series</p>  | <p>With safety a top priority, the REA family of relays is designed for the protection of medium and low-voltage air-insulated switchgear against arc incidents.</p> |
| <p>Test switches Flexitest™ switch</p>  | <p>Flexitest™ switches provide a safe, simple, fast and reliable method to isolate, test, and service installed equipment without disturbing the system.</p> |
| <p>Distribution protection relays & control solutions</p> | |
| <p>Relion® 605 series</p>  | <p>601 provides basic protection and control for feeder and motor applications. It is very compact, easy to install and engineer, having a built-in test function. The use is convenient with basic settings and an alphanumeric display. It has a very wide auxiliary voltage range with a universal power supply module, reducing the variants needed. The relay is offered with an optional galvanic communication module including several protocols.</p> <p>603 is a current transformer powered numerical feeder protection relay including overcurrent and earth-fault protection. It is designed for applications where auxiliary power is not available or cannot be guaranteed, thereby making it an ideal choice for installation at remote locations. The relay is primarily used in ring main units and secondary distribution switchgear within distribution networks.</p> |

| Product / Offering | Benefits and features |
|--|---|
| <p>Relion® 611 series</p>  | <p>Protection and control for the most typical applications including feeder, voltage and motor protection as well as a dedicated relay for high-impedance based differential protection. The relays are compact, easy to install and efficient to engineer with a matrix type of configuration. The relays are convenient to use due to the alphanumeric display and Web browser-based user interface. The withdrawable-unit design enables easier testing and speeds up maintenance activities. The communication capabilities of the relay ensure seamless system level integration.</p> |
| <p>Relion® 620 series</p>  | <p>Protection and control for a complete range of applications including feeder protection, transformer protection including automatic voltage regulation for an on-load tap changer, voltage protection, busbar protection and motor protection including motor differential protection. The wider case of the relay enables a high number of binary inputs and outputs and control of several circuit breakers. Flexible engineering is enabled using the graphical application configuration functionality, and all relevant information including a single line diagram view is provided to the end user via the local graphical display. In addition, the 620 series relays include programmable push buttons on the local HMI. The integrated ARC flash protection enables detection of arc faults in the busbar, circuit breaker and cable compartments. The withdrawable-unit design enables easier testing and speeds up maintenance activities. The relay offers a wide range of communication protocols and interfaces ensuring seamless system level integration. The 620 series is well prepared for digital switchgears and substations, with IEC 61850 Edition 1 and Edition 2 support, horizontal GOOSE messaging, redundant Ethernet communication including HSR and PRP protocols, and process bus according to IEC 61850-9-2 LE providing sampled measured values.</p> |
| <p>Relion® REX640</p>  | <p>REX640 offers all-in-one protection for any power distribution application. The relay introduces an entirely new application package concept, by offering a variety of ready-made application packages to choose from. The application packages include various protection and control functions, which can be flexibly combined to create protection solutions that meet your unique protection requirements. The available packages support the following applications: feeder protection, power transformer protection, machine protection, shunt capacitor protection, busbar protection, automatic synchronization, Petersen coil control and arc protection with supervised sensors. The modularity and scalability of both software and hardware allow you to create your own, unique relay for your specific protection requirements. A novel, application-driven approach to the local human-machine interface (LHMI) allows support for entirely new applications. The unique, 7-inch color touch screen visualizes power distribution process information in an entirely new way.</p> |
| <p>Electromechanical relays</p>  | <p>For new applications where reliable operation is essential, in harsh environments, or in existing installations where an exact replacement is required, ABB electromechanical relays are key components for your power infrastructure.</p> |
| <p>Substation Management unit COM600S</p>  | <p>A versatile substation management unit that performs a role of a communication protocol gateway, human machine interface (HMI) for monitoring and operations, with a capability to also run non-critical substation applications in medium voltage substations. It is deployed together with protection relays, substation devices such as RTUs, meters and PLCs in dedicated cabinets or in a switchgear and help realize smart substation and grid automation solutions in the utility and the industrial distribution networks by using process information and device data acquired over Ethernet or serial based standard communication protocols to execute specific substation tasks. As a substation computer, it comes with a robust IEC 61850-3 based design capable of hosting a high definition display interface and with pre-configured and user configurable cyber security features.</p> |
| <p>Arctic wireless controller ARC600</p>  | <p>The wireless controller ARC600 is a compact device for remote control and monitoring of secondary substations, such as network disconnectors, load break switches and ring main units (RMUs). It enables the SCADA system to wirelessly monitor and control the field devices over cost-effective public wireless networks.</p> |
| <p>Arctic wireless gateways ARG600 and ARR600, and M2M gateway ARM600</p>  | <p>The Arctic gateways provide reliable and secure monitoring and control of field devices over public wireless networks from a central location, in order to enable remote real-time grid automation. The devices offer industrial quality connectivity by supporting TCP/IP-based protocols, together with protocol conversion from legacy serial protocols.</p> |

| Product / Offering | Benefits and features |
|--------------------|-----------------------|
|--------------------|-----------------------|

Medium-voltage instrument transformers

Instrument transformers – indoor
Current and voltage transformers
0.72–40.5 kV

Dry type instrument transformers for indoor use providing high accuracy for measuring and protection applications as energy meters, protection relays, etc. Available to OEM manufacturers and assemblers for switchgear, power transformers, breakers, capacitor banks, substations, metering cabinets, machines, generators and compact secondary substations.



Instrument transformers – outdoor
Current and voltage transformers
0.6–40.5 kV

Dry type instrument transformers for outdoor use providing high accuracy and standard accuracy metering, relay protection, and control power. Available to OEM manufacturers and assemblers for switchgear, power transformers, breakers, capacitor banks, substations, metering cabinets, and pole mounts.



Solution for Ferro
resonance elimination
VT Guard Pro, VT Guard Pro-D

VT Guard Pro is an advanced security device that protects MV inductive voltage transformers (VTs) against Ferro resonant oscillations.



Low-voltage instrument transformers

LV instrument transformers
Current transformers 0.72 kV
type: IMP, IMR, IMS, IMW, ISW.

Dry type instrument transformers for indoor use providing high accuracy and standard accuracy metering, relay protection, and control power. Available to OEM manufacturers and assemblers for switchgear, metering cabinets.



Sensors – indoor
KEVCD, KECA, KEVA etc. types

Sensors offer a state-of-the-art way of providing the current and voltage signals needed for the protection and monitoring of medium-voltage power systems. Current, voltage and combined sensors with optimized designs open up numerous advantages and benefits for their users, e.g. fast and easy design process, quick delivery time, minimized cost during the life cycle, high flexibility, safety and reliability.



Sensors – outdoor
DistribuSense™
current and voltage sensors

Designed to support the needs of the grid, DistribuSense sensors have the highest measurement accuracy to maximize distribution grid efficiency, enhance distribution grid reliability, and provide high accuracy with easy installation.



Medium-voltage fuses

IEC fuses
CEF/CMF/CEF E- rated/
WBP/WBT

ABB current limiting fuses are back-up types and are designed for cooperation with contactors and load break switches or for stand alone application. Due to extremely fast operating times ABB fuses offer the most efficient protection level against all fault currents, protecting installed electrical apparatus. The unique combination of thermal striker pin and overload spots make them suitable for application in Compact Switchgear.



ANSI fuses
CLC/CIL/CXP/COL/CXLP

ABB capacitor fuses guard against potential damage caused by overcurrent and/or short circuit conditions in low- and medium-voltage applications. Our full range indoor current limiting fuses are ideal for use in metal-enclosed equipment, while full range outdoor current limiting fuses protect individual capacitors and capacitor banks. Outdoor expulsion fuses offer protection and visual indication of operation for ease of service.



| Product / Offering | Benefits and features |
|---|--|
| Medium-voltage indoor switches | |
| Load break switches VR/NAL  | The most economic switching device for high short circuit currents when combined with current limiting fuses. The VR/NAL switches offer high number of breaking operations for nominal load currents that allow long and reliable life time proven by over 600000 switches being in application worldwide since over 35 years. |
| Disconnectors OW/OWD/OJON  | Designed to withstand high short circuit currents and for easy disconnecting in off load conditions. Applicable for all modern network arrangements. |
| Earthing switches E/EK6  | The earthing switches family is composed of both free standing and build in products. The standard design provides possibility for emergency making operations. Compact design support application in switchgear and other enclosed panels. |
| Is-Limiter  | The ultra-fast solution for handling a short circuit current. In short-circuit-fault conditions this fast-acting switching device triggers a small charge to open the main conductor, which is designed to carry high-operating currents in normal conditions. The short-circuit current commutates to a parallel fuse with high breaking capacity, which limits the short-circuit current during the first rise within extremely short times. The Is-Limiter is a unique solution to limit short-circuit currents up to 210kA rms while handling operation currents up to 4000A. The wide range of applications, up to 40.5kV includes power supplies and industry applications through to special applications such as platforms, IPP's or applications with ultra-fast switching requirements. Considering the Is-Limiter on the early engineering phase of a new project or on the extension of an existing system, the Is-Limiter is able to offer technical and economic benefits to our clients. |
| Ultra-Fast Earthing Switch UFES  | Active internal arc protection for switchgear. Innovative arc flash mitigation in less than 4 ms: the highest possible level of arc flash protection for personnel and equipment, maintenance of secure power supply and the reduction of production stoppages. The occurrence of an arc fault, the most serious fault within a switchgear system, is mostly associated with extremely high thermal and mechanical stresses in the area concerned. A new, active arc fault protection system is based on the know-how gained from decades of experience with the ABB vacuum interrupter and IS-limiter technology. This latest arc fault mitigation technology now effectively helps avoid these negative effects should a fault occur. The ultra-fast earthing switch of the UFESTM-type is a combination of devices consisting of an electronic unit and the corresponding primary switching elements, which initiate a 3-phase short-circuit to earth in the event of a fault. The extremely short switching time of the primary switching element in conjunction with the rapid and reliable detection of the fault, ensures that an arc fault is extinguished almost immediately after it arises (Extinguishing time < 4 ms after detection). |
| HD4 - gas insulated circuit breakers  | HD4 circuit breakers are available in fixed or withdrawable versions. The withdrawable version is available for PowerCube fixed parts and enclosures, UniSafe and UniGear type ZS1 switchgear. HD4 circuit breakers are used in power distribution to control and protect lines, transformer and distribution substations, motors, transformers, capacitor banks, etc. They are also highly suitable for retrofitting, where the insulating materials of circuits may be sensitive to dielectric stresses. |
| VD4 - vacuum circuit breakers  | The VD4 vacuum circuit breaker with spring operated mechanism is excellently suitable for switching of short-circuit currents, overhead lines and cables under load and no load, transformers and generators, motors, ripple control systems and capacitors – even in parallel. |
| Medium-voltage indoor contactor | |
| Medium voltage contactor ConVac  | ConVac vacuum contactor is the best solution for controlling motors and switching apparatus requiring a high number of operations. ConVac contactors use vacuum interrupters and thanks to this breaking technique, they provide excellent performance and can operate in extremely harsh environmental conditions. They are suitable for switching motors, transformers, capacitor banks, switching and power factor correction systems and can be used for a variety of applications. When equipped with fuses, they can be used for circuits with up to 50kA fault levels. With its small footprint, up to 20% smaller than competitors, it is flexible and a user friendly switching solution. |

| Product / Offering | Benefits and features |
|--------------------|-----------------------|
|--------------------|-----------------------|

Medium-voltage passive voltage indicators

VisiVolt™



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.

Medium-voltage outdoor apparatus

Fuse Cutouts and Disconnect Switches

FUSE Cutouts
ICX NCX LBU



Used on overhead distribution systems up to 38kV and 200kV BIL to provide overcurrent protection and visible break as indication of fuse operation. Portfolio includes porcelain, silicone rubber, and polymer concrete insulators with interchangeable (ICX) design, a non-interchangeable (NCX) design with double venting capability, and a load break version (LBU).

DCD single phase disconnect switch



Hook stick operated disconnect switch used for sectionalizing or isolating circuits on electrical distribution networks up to 38 kV and 900 A.

RBD bypass disconnect switch



Used for bypassing and disconnecting reclosers or other equipment, allowing to work on any device without interrupting service. Up to 38 kV and 900 A.

SID and LSID
disconnect switch



Single insulator disconnect based on the cutout design up to 38 kV and 900 A, available with load break chamber capable of interrupting up to 600A.

ITD inline tension
disconnect switch



Hook stick operated disconnect switch up to 38 kV, 200 kV BIL and 900 A allowing installation directly on the line under mechanical tension, saving space and additional installation time and material.

Outdoor Recloser

GridShield® triple-single
phase Recloser



Whether performing three- or single-phase tripping, the GridShield® recloser is ready for any challenge and geared to support the different needs of the grid of tomorrow up to 38kV. Reliable and modular design of high voltage unit, smart control cabinet available with multiple recloser controllers.

OVR three phase Recloser



State of the art three-phase mechanically-ganged recloser. State-of-the-art interrupters and sensors casted in HCEP poles with the highest creepage distance on the market. High-end controller features to enable seamless integration into the network and advanced smart grid features.

| Product / Offering | Benefits and features |
|--------------------|-----------------------|
|--------------------|-----------------------|

Load Break Switches and Sectionalizers

Sectos SF6 Load Break Switch



Reliable operation even in the most demanding climatic conditions up to 36kV. Fully flexible from basic manual unit to tele-controlled fully automated motorized version with relay, current and voltage measurements and SCADA integration to support advanced smart grid logics.

NPS Air Load Break Switch



Compact and modular, the NPS provides visible break of main contacts, used in distribution overhead lines to disconnect or sectionalize. Available in manual and motorized versions.

AutoLink and WiAutoLink Electronic Sectionalizer



Isolating device designed to improve the service continuity of overhead distribution networks, used in conjunction with a recloser. The 15 kV, 27 kV and 38 kV versions up to 170 kV BIL, 200 A and 8 kA are available in three standard fully configurable models to minimize inventory. A load break option is also available to ensure safe manual opening under load conditions.

Substation Circuit Breakers

R-MAG® Dead Tank Breaker



Most reliable dead tank breaker on the market combining the unique benefits of vacuum interrupter technology with a state of the art magnetic actuator with limited moving parts. Up to 38kV, 200 kV BIL and 40 kA it is fully customizable with different CT ratios and controllers.

OVB-SDB and OVB-VBF Live Tank Breakers



Robustness ensures high performance in stressful environments up to 40.5 kV, 2500 A and 31.5 kA. Product standardization enables use across different applications, with several structure options for full flexibility.

Modular systems

eHouse



Metal-enclosed buildings providing greater safety, easier installation, maintenance and engineering, and on site testing – all contributing to cost reductions.

Compact Secondary Substation



Compact Secondary Substations (CSS) are prefabricated substations, which include a low voltage switchboard, a transformer and medium voltage switchgear. A CSS is internally arc tested for higher safety according IEC 62271-202, the dedicated standard to CSS. The ABB CSS portfolio is covered with different enclosure materials, including steel, and glass fiber reinforced polyester (GRP), an innovative material that provides the advantages of both steel and concrete enclosures. The CSS can be suited for harsh and demanding environmental conditions by choosing the suitable enclosure material.

Product packaging



Product packaging is the coordinated delivery of a multiple-element product package, including basic interface engineering between products, under a single commercial agreement. It offers risk mitigation, reduced client resources, and simplified project management and commercial agreement.

| Product / Offering | Benefits and features |
|--------------------|-----------------------|
|--------------------|-----------------------|

Medium-voltage secondary switchgear

Secondary air-insulated switchgear
UniSec indoor switchgear for medium-voltage secondary distribution up to 24kV



UniSec metal-enclosed switchgear is based on a highly flexible, modular concept with fewer parts and standardized solutions that can be readily configured to meet the specific needs of each application. This approach reduces training and maintenance requirements, ensures fast installation and facilitates future expansion to meet changing needs. UniSec offers highest level of safety with different solutions in terms of Internal Arc classification and Safety Interlocks.

SafeRing/SafePlus ring main unit (RMU) and compact switchgear for medium-voltage secondary distribution up to 36kV (40.5kV)



SafeRing and SafePlus provide complete, flexible and compact switchgear solutions. The completely sealed systems with a stainless steel tank, which contains all live parts and switching functions, ensure a high level of reliability, personnel safety and a virtually maintenance-free system. For fast delivery, SafeRing is available with pre-defined configurations for, e.g., transformer and switching stations, or as consumer switchgear with connection to the DSO (Distribution System Operator) network. SafePlus offers flexible customized switchgear to cover all distribution needs, including advanced grid automation (smart RMUs).

Medium-voltage primary ANSI AIS switchgear

SafeGear and SafeGear HD - Medium voltage, metal-clad switchgear for primary distribution up to 15 kV suitable for indoor installations



SafeGear, rated up to 50kA, and SafeGear HD, rated for 63kA, provide the added protection of arc-resistant construction. Arc-resistant design reduces life-cycle costs and improves personnel safety. Galvanized construction, hem bending, bolted frame, modular design, instrument compartment, breaker compartment, PT/CPT/Fuse compartment, bus and cable compartment. Uses ADVAC and AMVAC breakers, which have the lowest total cost of ownership and are the easiest breakers to maintain in the industry. Additional safety features: closed door racking, snuffer contact design – PTs/CPTs.

ReliaGear ND - Narrow design medium voltage switchgear for primary distribution up to 15 kV suitable for indoor applications



ReliaGear ND is rated up to 15 kV, 2,000 A, 31.5 kA, with one and two - high construction available, offering high level performance and a small footprint. Modular design allows extensive configuration flexibility. ReliaGear ND utilizes the Vmax/A spring-charged mechanism breaker, the easiest breaker to maintain in the industry resulting in the lowest total cost of ownership. Quality is assured by extensive design and production tests, coupled with ISO-9001-certified manufacturing facilities.

Advance - Medium voltage switchgear for primary distribution up to 27 kV suitable for indoor or outdoor installations



5, 15 and 27 kV rated metal-clad switchgear with a narrow footprint, designed and tested according to IEEE C37.20.2. Featuring galvanized steel construction, hem bending techniques, and Delrin arc-quenching contacts, Advance is designed with safety, reliability, and durability in mind. Uses ADVAC spring-charged mechanism breaker or AMVAC magnetically actuated breaker, which have the lowest total cost of ownership due to extremely low maintenance requirements. Enhanced safety for personnel and equipment. Design allows for flexibility in configuration. Forced air cooling available for 4,000 A applications up to 15 kV.

Advance MCC - motor control center up to 6.6 kV



Complete line of UL-listed motor control centers in ANSI/NEMA ratings, designed for use in heavy material handling, chemical processing, air movement and other demanding industrial applications. Complete range of ratings from 2.4 to 6.6 kV at 400 A and 720 A. Viewing window for visual verification of switch position and for viewing fuse trip indicators without opening the cell, increasing worker safety. 100 percent front accessibility; flexible application with a variety of configurations.

SafeGear MCC - motor control center up to 7.2 kV



Complete line of UL-listed arc-resistant motor control centers in ANSI/NEMA ratings designed for heavy industrial applications, including mining, power plants, steel mills, petrochemical and marine applications, transportation and general industry. Nominal voltage up to 7.2 kV and system voltage ratings of 2.4, 4.16, 4.8 and 6.9 kV; rated main BUS current at 1,200, 2,000 or 3,000 A. For optimal flexibility, the SafeGear MCC is designed to be used in combination with SafeGear metal-clad switchgear so a transition section is not required. Mechanical interlocks between the draw-out contactor truck and front door increase operation and maintenance safety. Each frame includes a separate, isolated low-voltage compartment that separates relays, meters and other instruments using grounded metal barriers, protecting maintenance personnel from exposure to high voltage. Hem bends are used throughout construction of the SafeGear MCC to increase rigidity and reduce arc propagation. Galvanized steel construction protects from rust, scratches and corrosion, and enhances illumination to provide better instrument viewing. Fully compliant with CSA and UL 347 5th Edition for Motor Control Centers and meets the IEEE C37.20.2 standard for metal-clad switchgear construction.

| Product / Offering | Benefits and features |
|--------------------|-----------------------|
|--------------------|-----------------------|

Medium-voltage service

A complete portfolio of products and services to support the entire lifecycle of medium-voltage switchgear.



Expert service that covers all requirements from installation and commissioning to circuit breaker retrofits and complete switchgear replacement. The portfolio supports both ABB and 3rd party manufactured switchgear to enhance and support the complete life of the installed asset through the use of correct spare parts, maintenance, upgrades and retrofits all of which can be bundled together into bespoke, comprehensive service support agreements.

Medium-voltage ANSI GIS switchgear

ZX2.2 - Medium voltage GIS for double busbar, single busbar and transfer bus applications up to 42 kV.



Arc-proof cubicles with vacuum circuit breakers in compact housing, suitable for requirements of the North American market. A GIS with three-position switches on both sides of the circuit breaker and additional cable grounding switch, as well as view ports for all disconnect and grounding switches are provided. ZX2.2 contains maintenance-free live components such as switching devices in a gas-tight stainless steel enclosure, reliably protected from aging.

ZX0.2 - Flexible switchgear system for mv power distribution up to 36 kV and 2500 A, single busbar, individual panel design.



Provides the option of wall or free-standing installation. The required panel depth for both installation methods is 1330 mm (52.36 in). Cable connection is effected via an outer cone system suitable for the current rating with access from the front. ZX0.2 frames are versatile in application and cover a broad range of instrument transformer configurations and frame erection methods. Provides for conventional control with a manually operated three position disconnect switch and offers functionality for a remote controlled system. This includes a multifunctional bay control and protection unit which handles all the protection, control, signalling, measurement and monitoring functions. The ideal solution for municipalities, utilities, industry and public buildings, as well as applications in the oil and gas industry.

ZX2 - Metal partitioned single or double busbar system up to 40 kV, 40 kA, 3000 A, (DBB 4000 A)



Offers combined protection and control devices or pure protection devices. SF6 gas insulation increases operator safety, as all MV parts are fully encapsulated, making contact with live parts impossible. Cables are accessible from the rear. All switching devices can be remote controlled and as an option mechanically interlocked. High flexibility for measuring systems combined with digital bay control technologies, conventional devices, and plug-in technology at all ends for easy installation. Signal detection by sensors or instrument transformers together with a direct bus to station automation system or conventionally by wire to the control center is available.



In addition to the Electrification Products distributor line card please refer to all ABB distributor line cards.

<https://go.insideplus.abb.com/divisions/electrification-products/division-functions/marketing-communications/line-cards>

Electric vehicle charging infrastructure

Terra DC wallbox



Terra DC wallbox, up to 24 kW peak power, is a futureproof investment supporting current and future EVs with high voltage charging, applicable to a wide variety of use cases, in an ultra-compact footprint, that is safe and reliable, for residential use too.

Terra AC wallbox



Terra AC wallbox, up to 22 kW, provides tailored, intelligent and networked charging solutions for any business, home or location. Space-saving and easy-to-install design, it has a broad range of connectivity options. Protections are integrated, including DC ground fault and overvoltage.

ABB Ability™

ABB Ability™ solutions give an answer to Industry 4.0 challenges, adding to digitalized assets new functionalities towards predictability, efficiency and collaboration. The ABB Ability™ solutions for electrification can be grouped in four main areas:



Grid and substation automation solutions, for the ongoing energy revolution, which requires high flexibility and scalability managing today networks challenges, like integrating renewables, e-mobility and energy storage systems.

ABB Ability™ Electrical Distribution Control System

ABB Ability™ Electrical Distribution Control System is the innovative cloud-computing platform designed to monitor, optimize, predict and control the electrical system. It is built on a state-of-the-art cloud architecture for data collection, processing and storage. ABB Ability™ Electrical Distribution Control System also provides access on a multi-site level-monitoring and comparing the performances of different facilities at the same time. In addition, it allows profiling of the users' experience according to the level of access they require.

<https://new.abb.com/low-voltage/launches/abb-ability-edcs>



Asset health and performance management solutions to apply condition monitoring and predictive based maintenance, providing optimized maintenance costs, higher safety and performances.



Energy and power management solutions to maximize power availability, power quality and improve energy efficiency.



Cyber asset management solutions to manage connected electronic devices during life time and to mitigate cyber security risks.

ABB Ability™ for electrical distribution

Asset health and performance management

ABB Ability™ Asset Health for electrical systems

ABB Ability™ Asset Health for electrical systems, also called MyRemoteCare, helps service engineers to implement condition-based maintenance. It is based on ABB innovative cloud-computing architecture, for data collection and analysis. MyRemoteCare provides continuous monitoring of switchgear and circuit breakers and evaluates events, alarms and trips to detect in advance unexpected failures, and drive maintenance activities when required, reducing operational cost.

MyRemoteCare platform is a remote monitoring platform to improve operator safety and to enable collaboration with service experts.

<https://new.abb.com/medium-voltage/service/maintenance/myremotecare>

ABB Ability for electrical distribution - Asset health and performance management



ABB Ability™ for electrical distribution

Cyber asset management

ABB Ability™ Backup management for electrical systems

ABB Ability™ Backup management for electrical systems, also called Data Care, provides a safe, secure and advanced data-sharing and backup service to help all users to easily access information online 24/7. It is based on ABB innovative cloud-computing architecture for data collection, processing and storage. Data Care allows secure control on users access rights, activity, and a safe place for substations data, configuration and documentation, as well as notification on security updates of devices firmware and software.

<https://new.abb.com/medium-voltage/distribution-automation/protection-relay-services/advanced-services/data-care>

ABB Ability for electrical
distribution - cyber asset
management

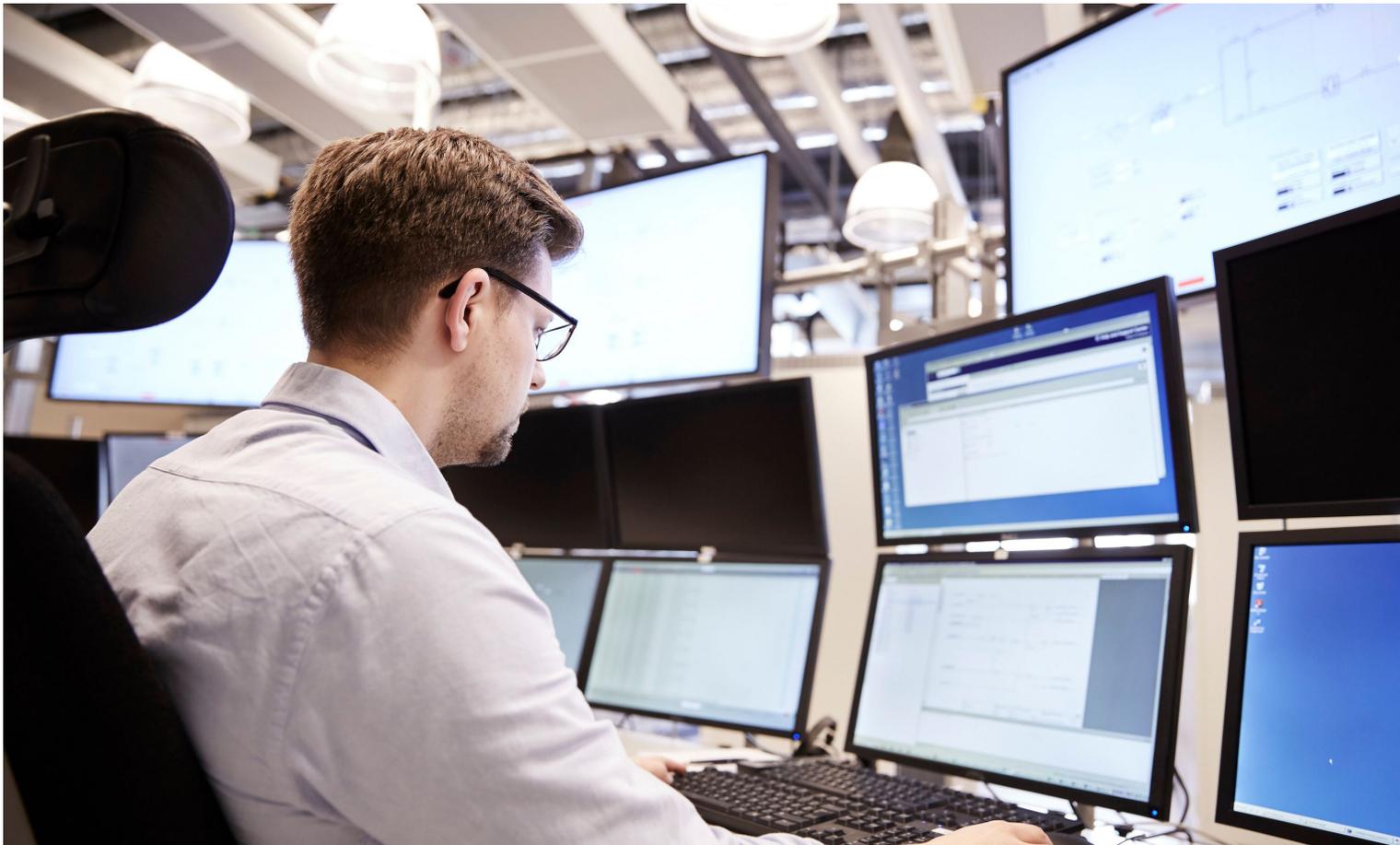


ABB Ability™ digital switchgear

ABB's low- and medium-voltage digital switchgear solutions incorporate intelligent components to enable safe, flexible and smart electrical networks that deliver power reliably and efficiently. These ABB Ability™ solutions are built on ABB's well-established switchgear families and solid experience of pioneering the digitalization of power distribution networks. With digital switchgear customers gain even further increased robustness, maximized power availability and reduced operational expenditure.

Changes in switchgear functionality can be done quickly and easily by updating software instead of hardware modification. Digital switchgear gives you access to real-time data from across your operations, preparing you for Industry 4.0 and opens up new possibilities for process and asset monitoring on premise with ABB Ability™ Condition Monitoring, and advanced cloud analytics with ABB Ability™ Asset Health.

RELATED OFFERING

Digital solutions

e-Configure

ABB has launched a configuration tool for enclosures and products. For a low voltage electrical system, product configuration is a key step in the purchase process. ABB has developed an easy-to-use online solution to support customers. With e-Configure, customers will be able to find, select, configure and order their products quickly and simply.

<http://new.abb.com/low-voltage/support/software/e-configure>

ABB Connect

Whether you're exploring our product information, saving and editing documents, accessing ABB apps, or reading industry news, ABB Connect is the digital assistant that will meet all of your electrification needs. Search 'ABB Connect' on the Apple App Store, Google Play Store or Microsoft Store and download today.

<http://new.abb.com/low-voltage/service/abb-connect>

ABB Connect

Your Digital Assistant

Connect to your electrification solutions with your digital assistant, access the latest news and create your own digital workspace.

Available for use on iOS, Android and Windows 10.

new.abb.com/low-voltage/service/abb-connect

Support and Service

ABB supports its customers with dedicated, global service organization in more than 60 countries and strong regional and national technical partner networks providing complete range of life cycle services.

ABB

For more information and local contacts, please visit:

www.abb.com

new.abb.com/low-voltage

new.abb.com/power-converters-inverters/solar

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