









Low-voltage products and systems



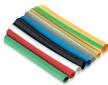
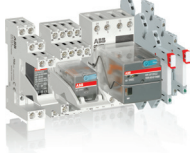



Transportation infrastructure global product offering

Understanding the importance and complexity in running and operating transportation infrastructure, ABB offers products and solutions to meet your requirements. With the new range of power circuit breakers, switchboards, distribution cabinets and protection products, ABB ensures maximum safety and efficiency to your installations.








Product / Offering	Benefits and features
<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 as well as products with specific purposes. The AF contactor technology revolutionizes how we use contactors and allows use 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. The AS contactor is efficient and allows optimization of equipment design. You can choose terminals between screw, spring and ring tongue from our range of products.</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>ABB i-bus® KNX Smart Home and Intelligent Building Control</p> <p>Illumination and Light Sensors</p>  <p>Shutters and Sun Protection</p>  <p>Heating, Ventilation and Air Conditioning</p>  <p>Security and Surveillance</p>  <p>Visualization, Display and Signalling Devices</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>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>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>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> <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>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>

Product / Offering	Benefits and features
Air Circuit Breakers 	<p>ABB Emax2 is the new benchmark of air circuit-breakers that not only monitors power, but has evolved into a true power manager. It is offered in frame sizes up to 6300A with exclusive integrated functions such as the Ekip power controller, generator protection and network analyzer functions. Emax2 is the only breaker that protects electrical circuits and also reduces energy consumption based on the user's needs, thereby leading to massive reductions in energy waste. Emax2 contains the perfect blend of control, connectivity, safety and performance.</p>
Bar mounted contactors for power switching 	<p>ABB's Bar mounted contactor range is a power contactor range for AC or DC load with a flexible design.</p>
Cable Distribution Cabinets and Board 	<p>Kabeldon Cable Distribution Cabinets fit well in most environments. They come in various designs and sizes, and perform well even under very tough conditions. At the same time, they satisfy current requirements for long life with undiminished safety and low operating and maintenance costs.</p>
Cable Ties, Tools and Accessories 	<p>ABB offers one of the industry's broadest ranges of fastening solutions including the trusted Ty-Rap® brand. With our Ty-Rap rail, ABB offers specially developed cable ties for the rail industry (RW), meeting the requirements for modern rail vehicles. The type MX-RW cable ties offer UV protection according to ISO 4892-2 for outdoor use and also tested according to IEC / EN 62275 and UL 1565 and EN 45545 HL2 (R22 and R23) and I3 / F2 in the French standard NF F 16-101 / -102 for use in areas with special fire protection requirements such as passenger carriages.</p>
Cable Tray and Metal Framing 	<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 1^m modular system, and hundreds of accessories to complete any job.</p>
Cam Switches 	<p>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>
Compression Cable Lugs and Tools 	<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>
Conduit and Fittings 	<p>ABB is the global leader in nylon cable protection systems led by the PMA® and Adaptafl ex® brand of highly engineered nylon conduits and fittings. In addition, the ABB offering includes metallic and ATEX/IECex/UL/CSA systems for demanding applications.</p>
Connection Devices 	<p>ABB offers the widest range of connection technologies for rolling stock and railway infrastructure applications, complying with main international railway standards: PI-Spring, pluggable, ADO System® (IDC), Stud and Quick-Connect.</p> <p>ABB is supporting its customers from the engineering part – with the user-friendly Easy Rail Designer 3D configuration software – to the assembling process – providing pre-mounted and pre-marked terminal block assemblies.</p>

Product / Offering	Benefits and features
<p>Consumer Units System pro <i>E</i> comfort</p> 	<p>System pro <i>E</i> 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 <i>E</i> comfort one of the most complete ranges of consumer units to complete ABB's offer for protection, control and monitoring.</p>
<p>Control and Automation Boards System pro <i>E</i> control</p> 	<p>System pro <i>E</i> control is ABB's range of metal structures for automation. These have been enhanced thanks to the experience gained from working on the most industrialized and technologically advanced world markets. The metal structures conform to the IEC 62208, the IEC 60439-1 and to the new IEC 61439-1-2 Standard. Their performances are the market benchmark: high IP degrees of protection and IK resistance to mechanical impact, which permits installation in most industrial environments. System pro <i>E</i> control includes enclosures in steel sheet powder coated and enclosures in stainless steel AISI 304, allowing for indoor and outdoor installations.</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>EasyLine XLP, Fuse Switch Disconnectors</p> 	<p>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 bus-bar adapters.</p>
<p>E-Klips fasteners of rail heater fixings</p> 	<p>E-Klips fasteners for rail application offers a quick, easy and reliable method of fixing services to steelwork without the need for bracket making, drilling holes or the use of nuts and bolts. Strong, easy to install and lightweight. The Z600+ anti-corrosion system (zinc based, chromium free coating) passed a 600 hour salt-spray test. Design with multiple points of contact prevents clips from moving or being pulled off even under extreme conditions. Carbon spring steel for excellent shape retention, operating under extreme temperatures.</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>
<p>Electronic Timers</p> 	<p>The electronic timers of the CT range have been used in applications worldwide and have proven their excellent functionality in daily use, even under the toughest conditions. Three ranges of electronic timers 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>Emergency and Residential Lighting</p> 	<p>ABB offers of a comprehensive portfolio of stylish and robust emergency and residential 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 luminaires that lower energy and maintenance costs. (Note: Building and safety standards and brands vary by country.)</p>
<p>Emergency Stops and Pilot devices</p> 	<p>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 grab wire emergency stops that allow emergency command from any point along the installed wire length.</p>

Product / Offering	Benefits and features
Enclosed Switches 	<p>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 made of plastic, sheet steel, aluminum or stainless steel.</p>
Enclosures 	<p>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>
Heat Shrink Solutions 	<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>
Installation Contactors 	<p>ESB installation contactors are mainly used in buildings for switching and controlling lighting, heating, ventilation, motor and pumps. They are designed to match the ABB modular DIN-Rail components and can be easily integrated in dedicated panels. EN contactors have a built-in toggle switch for automatic and manual application.</p>
Interface Relays and Optocouplers 	<p>ABB's interface relays and optocouplers ensure a reliable voltage conversion between process peripherals and higher level control systems. For all sorts of machinery, our relays ensure reliable signal switching and provide electrical isolation for your sensitive electronics such as PLCs. The wide variety of pluggable interface relays with standard or logic sockets can be used for switching AC or DC loads. Suitable for extreme environments, ABB's interface relays offers a range of different coil voltages and plug-in functional modules.</p>
Limit Switches 	<p>Limit switches are electromechanical devices. The contacts are mechanically linked to an actuator. By combining different types of actuators, casings and contacts, our limit switches are perfectly suited to a large variety of applications, whatever the environment.</p>
Main Distribution Boards System pro E power 	<p>System pro E power is ABB's solution for main distribution switchgears with rated current up to 6300A and short-circuit current up to 120kV. 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>
Manual Motor Starters 	<p>Manual motor starters are electromechanical protection devices for the main circuit. They are used mainly to switch motors manually ON/OFF 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 off the motor within milliseconds. Starter combinations are set up together with contactors.</p>
Miniature Circuit Breakers (MCBs) 	<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>
Modular DIN-Rail Components (MDRCs) 	<p>Modular DIN-Rail Components, or MDRC, is a range of components that provide all functions to complete the offering of an electric switchboard (other than line protection and residual current protection) such as measuring, controlling and commanding. They are plugged on a standard DIN-Rail in just one click.</p>
Molded Case Circuit Breakers 	<p>ABB's molded case circuit breakers guarantee an extremely high performance level while being progressively smaller in size, simple to install and able to provide increasingly better safety. Our Tmax XT range is complete with four frame sizes: XT1, XT2 up to 160A, and XT3, XT4 up to 250A. Our Tmax T range completes the offering up to 3200A.</p>

Product / Offering	Benefits and features
<p data-bbox="107 113 329 140">Optical safety devices</p> 	<p data-bbox="594 113 1541 317">Optical safety devices are used to detect the presence of a person or an object in a dangerous area. A light curtain has several infrared light beams that are placed closely together, whereas a light grid consists of up to four light beams. Light curtains are often chosen for short distances and light grids for longer distances. The optical device can be placed as protection in an opening or around the dangerous area. When a light beam is interrupted, a dual stop signal is given to the dangerous machine inside the protected area.</p>
<p data-bbox="107 354 240 382">Pilot Devices</p> 	<p data-bbox="594 354 1541 411">From the smallest inside component to the outer tough shell, ABB's pilot devices are pieces of engineering ingenuity. They are reliable, flexible, and available worldwide.</p>
<p data-bbox="107 474 480 501">Primary Switch Mode Power Supplies</p> 	<p data-bbox="594 474 1541 590">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 data-bbox="107 627 277 684">Residual Current Devices (RCDs)</p> 	<p data-bbox="594 627 1541 772">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 data-bbox="107 806 337 863">Safety control modules and devices</p> 	<p data-bbox="594 806 1541 894">ABB offers safety relays for all kinds of safety devices. The safety relays have great flexibility and a wide range of input options. They are small and compact with an excellent reliability and safety level.</p>
<p data-bbox="107 926 440 953">Safety Edges, Bumpers and Mats</p> 	<p data-bbox="594 926 1541 1071">Pressure sensitive devices detects when pressure is being applied. For example, when a person is being hit by the safety edge/bumper or is standing on the safety mat. Safety edges and bumpers are used as protection against squeezing. Bumpers are used for longer stop times. Safety mats are used primarily for area protection around dangerous machines.</p>
<p data-bbox="107 1104 362 1161">Safety Sensors, Switches and Locks</p> 	<p data-bbox="594 1104 1541 1161">ABB has a full range of sensors, switches and locks used to control the gates and hatches around hazardous machinery, and to monitor the position of a machine.</p>
<p data-bbox="107 1226 285 1253">Signal Converters</p> 	<p data-bbox="594 1226 1541 1341">ABB's universal signal converters of the CC-range amplify, convert, isolate and measure any type of analog signal to ensure safe and reliable plant processes. Whenever you need 3-way electrical isolation, select an ABB signal converter to protect your process and automation applications from overvoltage.</p>
<p data-bbox="107 1373 313 1430">SlimLine XR, Switch Disconnects or Fuse</p> 	<p data-bbox="594 1373 1541 1518">The 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="107 1551 334 1579">Spring Steel Fasteners</p> 	<p data-bbox="594 1551 1541 1667">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>

Product / Offering	Benefits and features
<p data-bbox="107 113 347 134">Sub Distribution Boards</p> <p data-bbox="139 140 399 165">System pro E energy DL160</p>  <p data-bbox="139 323 415 346">System pro E energy TwinLine</p> 	<p data-bbox="597 147 1487 294">The DL160 compact distribution boards are the perfect solution for best functionality and aesthetic design. The attractive door frame in combination with its sheet steel or all-glass door turns the DL160 into a true showpiece. In addition, its exemplary ease of assembly provides for an installation with just a flick of the wrist. This will save time and money.</p> <p data-bbox="597 327 1531 535">With the TwinLine system, another benchmark in the field of modern power distribution is set. TwinLine has 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. System intelligence comes as standard with TwinLine because in combination with CombiLine-M modules, TwinLine offers unlimited possibilities for the internal configuration.</p>
<p data-bbox="107 564 276 617">Surge Protective Devices (SPDs)</p> 	<p data-bbox="597 564 1511 621">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 data-bbox="107 686 243 707">Switch Fuses</p> 	<p data-bbox="597 686 1531 800">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="107 837 285 858">Transfer Switches</p> 	<p data-bbox="597 837 1515 951">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>
<p data-bbox="107 989 375 1010">Wire Termination and Tools</p> 	<p data-bbox="597 989 1515 1073">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 data-bbox="107 1110 228 1131">Wiring Duct</p> 	<p data-bbox="597 1110 1531 1194">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>

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.

Contact us

ABB

Low Voltage Products

Cityport, Affolternstrasse 44, Zurich 8126

Switzerland

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new.abb.com/low-voltage/industries/rail/

power-to-the-line

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