



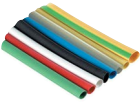








Low-and medium-voltage products and systems

Rolling stock global product offering

Working worldwide with leading vehicle manufacturers and transport operators, ABB offers a broad range of low- and medium-voltage solutions, for rolling stock to suit each of your applications and increase the efficiency of your equipment.

Product / Offering	Benefits and features
<p data-bbox="73 996 263 1041">Cable ties, tools and accessories</p> 	<p data-bbox="438 996 1527 1164">ABB offers one of the industry's broadest ranges of fastening solutions, including the trusted Ty-Rap® brand. With Ty-Rap rail, ABB offers specially developed cable ties and mounting bases for the rail industry (RW) that meet all the requirements for modern rail vehicles. The type MX-RW cable ties offer UV protection according to ISO 4892-2 for outdoor use and are 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. We also offer Bind It, robust, flame-retardant braided sleeves for the bundling and protection of cables, tested according to EN 45545-2: HL3, and to NF F 16 101/-102: I2-F1.</p>
<p data-bbox="73 1265 295 1310">Compression cable lugs and tools</p> 	<p data-bbox="438 1265 1527 1332">AWG, IEC and DIN compression connectors, made of the highest-grade materials offering high conductivity/low resistance, that meet or exceed all industry standards. The range includes straight and angled connectors and splices, plus a full offering of mechanical, pneumatic, and battery operated compression tools.</p>
<p data-bbox="73 1534 231 1579">Electronic timers</p> 	<p data-bbox="438 1534 1527 1668">ABB's electronic timers are used in railway applications worldwide and have proven their excellent functionality in daily use, even under the toughest conditions. The CT-S range is designed for harsh environments and offers not only standard screw type terminals but also push-in terminals with excellent vibration resistance - perfect for use in rolling stock. The electronic timers are available as single or multifunctional devices, covering all timing control needs in e.g. passenger compartments or other railway infrastructure applications. Special product versions of the CT-S range offer extended performance for applicable parts of rolling stock standards.</p>
<p data-bbox="73 1803 263 1848">Conduit and fittings</p> 	<p data-bbox="438 1803 1527 1915">ABB is a market leader in flexible conduit systems. With PMA and Adaptaflex, ABB offers one of the world's broadest ranges of cable protection products and solutions for the railway industry. The range covers non-metallic and metallic flexible conduit systems for the protection of critical power and data cables. Our special railway engineering product line provides protection and safety for signaling, high voltage, points heating, wheel sensor, breaking, rail crossing and tunnel installations, and other applications for railway infrastructure.</p>

Product / Offering	Benefits and features
<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, offered with or without glue (dual).</p>
<p>Measuring and monitoring relays</p> 	<p>ABB offers all the important measuring and monitoring relays required for a wide range of applications, no matter what environment you operate in. All electrical key parameters of single- and three-phase networks can be monitored, including special purpose products, e.g. for insulation and grid feeding monitoring. Further products offer reliable temperature measurement and help to protect motors and other equipment. Reliable protection of assets is ensured by choosing from this large range of high quality multifunction or single function products. Special product version offer extended performance for applicable parts of rolling stock standards.</p>
<p>DCBreak</p> 	<p>The DCBreak circuit breaker family for rolling stock combines a small footprint, reduced weight, high flexibility and reliable operation with minimal maintenance. The DCbreak range is rated 1500 A, 900 V and 1800 V, 1500A/ 30 KA and type tested according to the latest IEC 60077-3 and IEC 61373 standards. It is particularly suitable for on board applications for metro, tramway and light rails. Available as free standing units, or within an optional enclosure, DCBreak circuit breakers are intended for the simple plug-and-play replacement of a majority of similar products from other brands.</p>
<p>Contactors and contactor relays</p> 	<p>3 and 4-pole contactors up to 200 kW/400 V - AC-3, 300 hp/480 V, and up to 600 V AC-1, 4 and 8-pole contactor relays can be installed in any environment, including passenger or driver cabins, for main or urban line trains, underground trains, or trams circulating frequently in tunnels or underground passages. They are used in rolling stock applications such as lighting, heating, breaking, air conditioning, ventilation and door control. They are available with non-detachable screws for standard or ring tongue ferrules and meet all rolling stock standards: EN/IEC 60077-1/2 and EN 50155 for applicable parts, EN/IEC 61373 cat.1 class B, fire and smoke European standards EN45545-2 (HL2 or HL3).</p>
<p>Motor protection</p> 	<p>Starters protected by manual motor starters up to 30 kW or thermal overload relays up to 18.5 kW can be installed in any environment, including passenger or driver cabins, for main or urban line trains, underground trains, or trams circulating frequently in tunnels or underground passages. They are used in rolling stock applications such as breaking, air conditioning and ventilation. All products meet the latest rolling stock and fire and smoke European standards.</p>
<p>Overload relays</p> 	<p>TF42B thermal overload relays are devices to protect motor starting solutions complying with the latest railway rolling stock standards. They can be installed in passengers or driver cabins for trains frequently operated in tunnels or undergrounds.</p> <p>They offer a reliable thermal protection in the event of overload or phase failure. TF42B is fully coordinated with AFZ..B contactors.</p>
<p>Miniature circuit breakers (MCBs)</p> 	<p>Miniature circuit breakers protect electrical installations against overloads and short circuits, 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: a delayed thermal tripping mechanism for overload protection, and a magnetic tripping mechanism for short circuit protection.</p> <p>For rail applications the following MCB types are suitable: S 200 MT, S 200 MT UC, S 200 M UC, S 200 P</p>

Product / Offering**Benefits and features**

High-performance circuit breakers



ABB's S800S high-performance circuit breakers are the best choice worldwide for industrial heavy duty applications. Thanks to an innovative short circuit extinguishing technology, S800S and S800S UC are the right solution when both size and performance matter. The compact and reliable solutions for line protection are available with a breaking capacity up to 50kA and rated current up to 125A.

Moulded case circuit breakers



SACE Tmax XT moulded 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.

Residual current devices (RCDs)



Residual current devices protect people from life-threatening indirect contact with electricity. ABB's range of RCDs includes RCCBs, RCBOs, RCD blocks, earth leakage relays (DIN-Rail and front panels). Compliant with IEC/EN 61008 or IEC/EN 61009 they can be installed in all residential, commercial and industrial applications. For rail applications DS201 T is specifically suitable.

Surge protective devices (SPDs)



ABB's SPDs are available for all kinds of electrical networks (TT, TNC, TNS, IT) and can be installed in all applications, from low-voltage power to data and telecom lines, CCTV PV, WT, LED and self-protected. They are fully equipped with end of life indicator, safety reserve system and auxiliary contacts.

Wire termination, shielded connectors and tools



A full line that includes insulated and non-insulated terminals, wire joints, ferrules, heat-shrinkable terminals, splices and disconnects in imperial and metric sizes. A complete set of tooling is included. In addition, ABB offers crimping technology for shield termination on shielded cables. These very compact connectors have low overall height, require no soldering, and do not risk damage from heat.

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.

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

ABB

For more information and local contacts, please visit:

new.abb.com/low-voltage/industries/rail/power-in-the-vehicle

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