

FACT SHEET

ABB rail and urban transportation offering

Writing the future of mobility



When it comes to low-emission transport and fast, safe mobility, rail travel is difficult to beat. Urban centers are increasingly turning to high-speed trains to improve intercity connections, install light rail, metro systems and trams to alleviate congestion, reduce emissions and improve quality of life.

— ABB's digital technologies are helping to drive the development of rail transportation around the world.

The next generation of sustainable transport

ABB has been a pioneer in rail technologies for over a century and continues to develop, manufacture and service critical components introducing new technologies for both alternating current (AC) and direct current (DC) urban rail transport applications. ABB is also working with partners to upgrade trains to meet future needs as sustainable transport enters a new era. This includes leading integrated and collaborative digital solutions with ABB Ability.

ABB's offering overview

ABB provides power and automation technology for customers ranging from train makers to rail operators. It designs, engineers and commissions solutions to deliver safe, reliable, and cost effective rail freight and passenger transportation solutions.

ABB's product offering includes traction transformers, motors and converters to move vehicles quickly and reliably. And for diesel trains, ABB's generators and turbochargers boost efficiency and power. To protect and control the electrical equipment in trains, ABB offers circuit breakers, contactors, connection devices and all types of electronic relays and timers for on-board applications.

The portfolio also includes power system solutions including traction substations that feed and distribute electricity to the lines, as well as high- and medium-voltage switchgear, converters and transformers necessary to power trains at a frequency they can use. ABB also delivers technologies to improve power quality and protect the network from voltage disturbances.

ABB Ability™ : Keeping services on track

ABB also offers complete service, maintenance and refurbishment solutions, which are becoming increasingly important as rail operators seek cost-effective solutions to update or retrofit fleets to meet the demands of the future. As part of its service offering, ABB provides software-based solutions to facilitate the integration of operational and information technologies and enable asset health management.



— 01 World's most powerful rail frequency converter system from ABB.

— 02 ABB also offers complete service, maintenance and refurbishment solutions.

Some successes

- Deutsche Bahn (DB), Germany: ABB has delivered the world's most powerful rail frequency converter system to E.ON, the leading German utility, capable of supplying up to 413 megawatt (MW) to the German Railways.
- Swiss Federal Railways (SBB), Switzerland: ABB is installing energy-efficient traction converters in more than 100 Re460 locomotives, extending their service life by 20 years as well as providing three traction substations to help boost power and increase capacity network.
- Network Rail, UK: One of the UK's oldest and busiest railways has turned to ABB for traction substations to upgrade its electrification system, boosting the reliability of trains running between England and Wales.
- Stadler, Switzerland: Since 2002, Stadler has ordered ABB traction equipment for more than 1,500 regional trains and more than 300 light-rail vehicles.
- Southeastern Pennsylvania Transit Authority (SEPTA), US: ABB partnered SEPTA to install the ENVILINE™ unique hybrid energy storage system for DC rail transportation, reducing energy consumption and generating greater revenue.
- CNR, China: ABB supports the rapid development of China's rail transit with leading traction systems installed on the first rapid regional trains (RRT) developed by CNR Changchun Railway Vehicles Co.
- Greater Kuala Lumpur, Malaysia: ABB supplied DC traction substations and auxiliary AC substations for the 17.7-kilometer extension of the Ampang Line, alleviating traffic congestion.

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