



Low voltage products and solutions
for infrastructure and rolling stock
applications

ABB in transportation

Innovative solutions for sustainable mobility

ABB is a world leading supplier of innovative technologies for transportation with a comprehensive range of solutions for rolling stock and infrastructure.

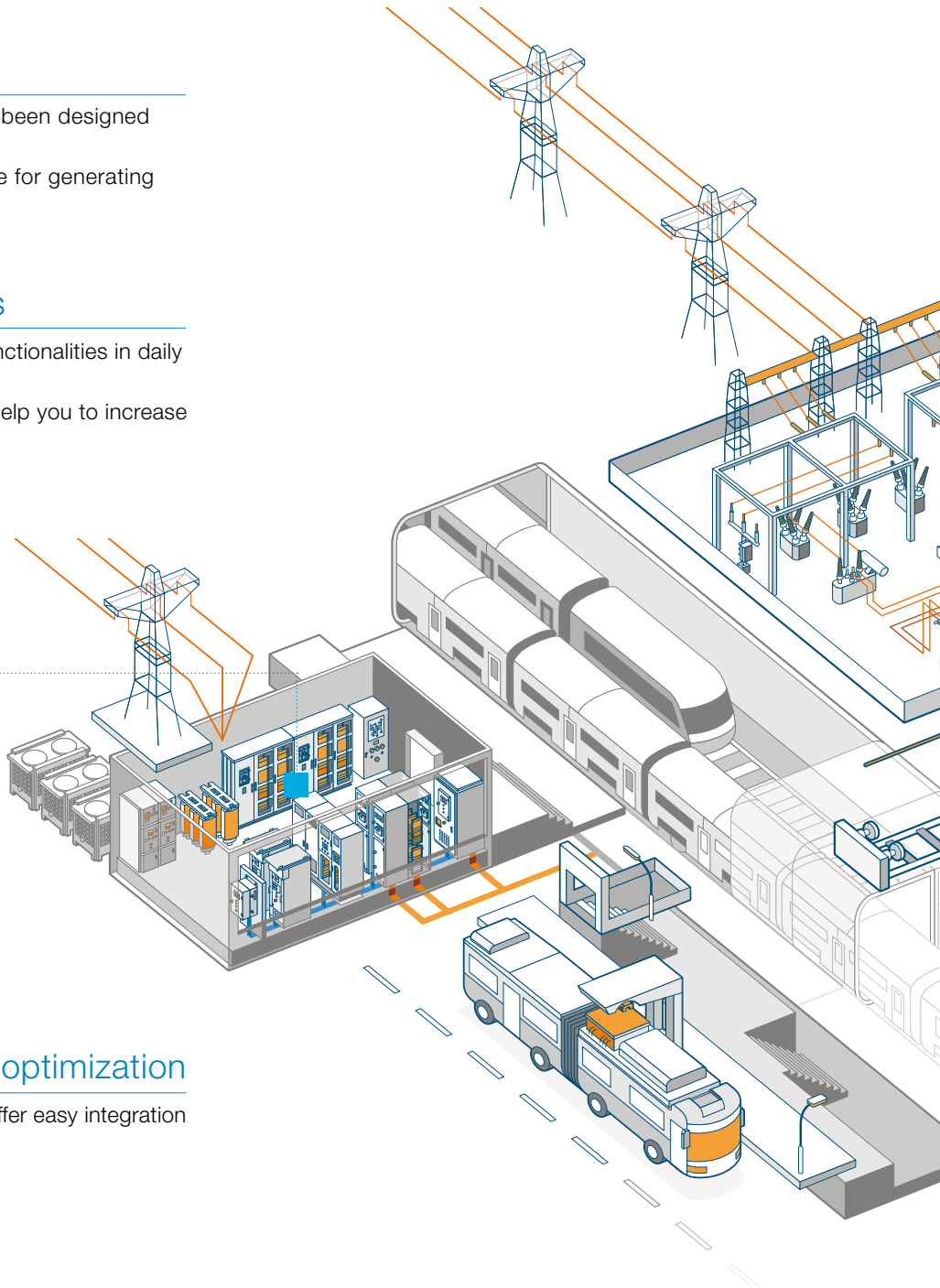
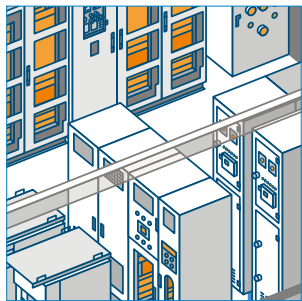
We help to keep the world moving with new sustainable approaches that enable customers to use energy effectively, creating a low carbon transportation industry that operates with maximum efficiency and reliability.

Energy saving

Our innovative products and solutions have been designed to increase efficiency in all installations. Reliable systems managed with competence for generating productivity and energy saving.

Ensure continuity of services

ABB products have proven their excellent functionalities in daily use under the toughest conditions. Our high performance products allow us to help you to increase the reliability of your equipment.



Easy integration and system optimization

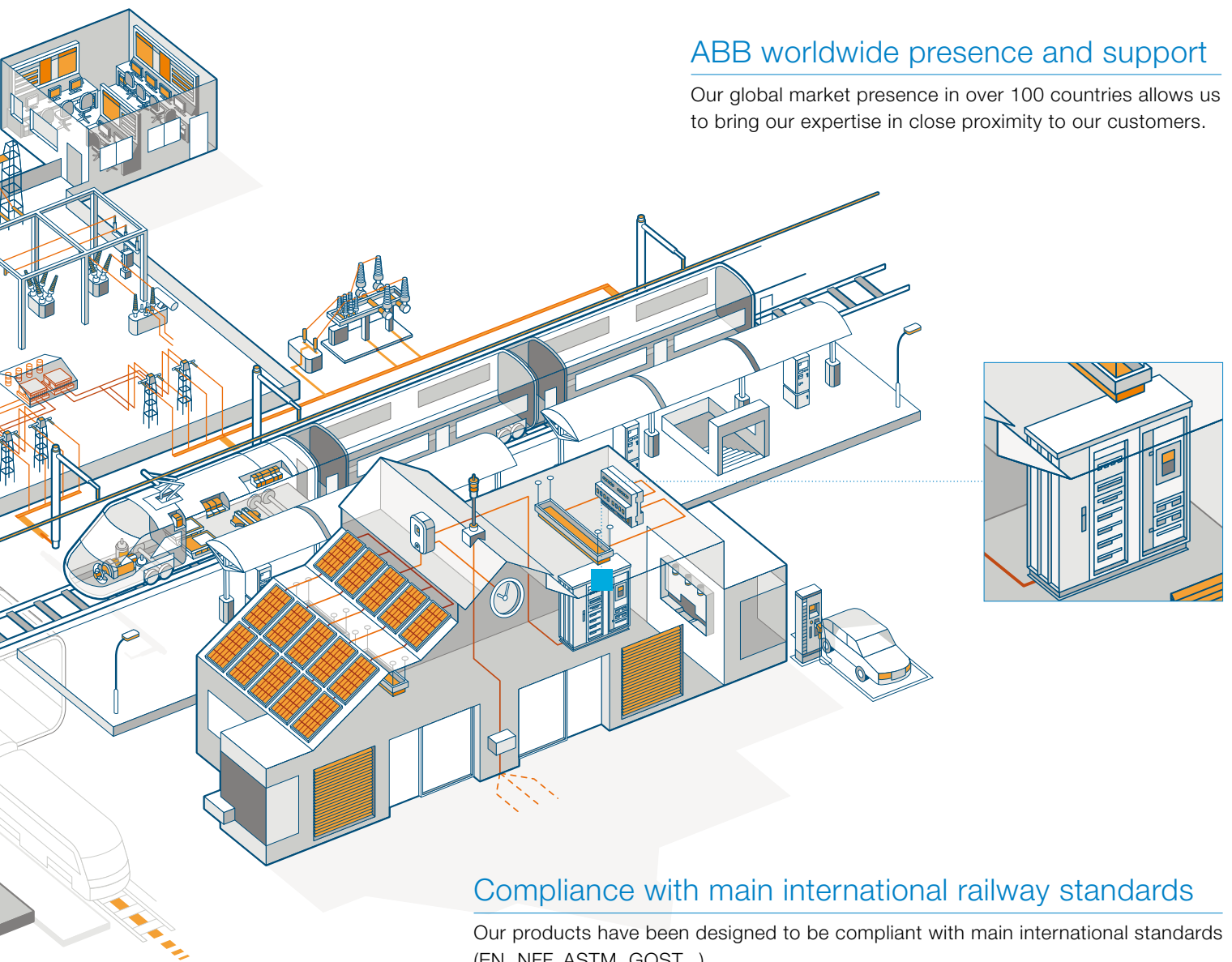
ABB compact and modular product ranges offer easy integration into all types of switchgear and automation.

ABB supports the high levels of expectations for a safe means of transport

Our knowledge of more than 30 years in the railway industry allows us to offer a wide range of products and solutions for rail applications, which meet the latest international standards and customer's requirements.

ABB worldwide presence and support

Our global market presence in over 100 countries allows us to bring our expertise in close proximity to our customers.



Compliance with main international railway standards

Our products have been designed to be compliant with main international standards (EN, NFF, ASTM, GOST...).

ABB factories are IRIS certified. This is showing our commitment to optimize all processes and to participate in the development for a sustainable mobility.



Low voltage products for infrastructure



ABB understands the importance and value of importance already implies imperative running railway networks, that's why ABB knows how to develop products and solutions to meet your requirements. You can count on ABB to supply reliable equipment that protects your infrastructure installations whether it's to manage, control or communicate a function or process.

So, with our wide range of power circuit breakers, switchboards, distribution cabinets or with our KNX intelligent building management solutions, we contribute fully to the successful building and to the performance of your installations.



1 Energy distribution and control cabinets

- System pro E power
- System pro E control
- System pro E energy.

Wide range of ultra-sturdy and safe construction switchgear systems and cabinets for electrical LV distribution, control and automation application.



State of the art design for future-oriented solution up to 6300 A for main distribution.



4 Contactors and motor protection

Complete range of high performance devices: manual motor starters, contactors, overload relays. Our new line of AF contactors has been developed in order to meet the main standards of the toughest industrial scenarios where high reliability level, safety and energy efficiency are required.



2 Circuit breakers

Power managers

- Molded case circuit breakers Tmax and switches OT up to 3200 A
- Power circuit breakers Emax 2 up to 6300 A.

Maximum safety for the installation components and the reliable control and supervision of the electrical plant.



3 Modular components - System pro M

The wide product range for:

- Protecting and switching up to 125 A
- Monitoring, controlling and measurement
- Lightning conductors and Surge Protective Devices.



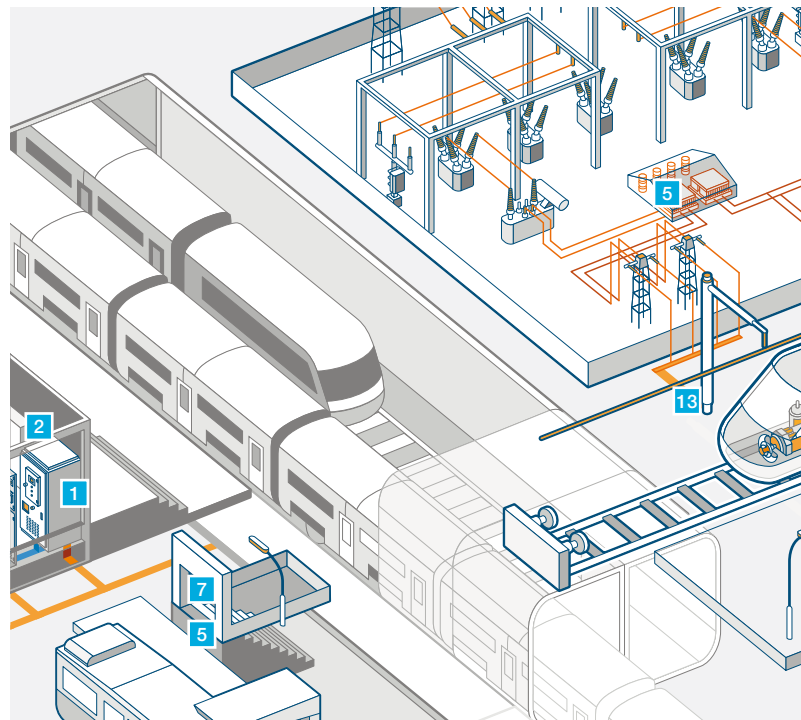
Intelligent building management - KNX

The optimization provided by ABB's intelligent building makes a major contribution to sustainable development.



Pluggable Socket System - SMISLINE TP

Allows changes and expansion during ongoing operations and prevents any danger to personnel from switching arcs or accidental arcing.



5 Current & Voltage Sensors

- Closed loop hall effect sensors
- CS type sensors from 100 to 2000 A
- Hall effect electronic sensors.
- NCS type sensors from 4 kA to 40 kA
- Voltage sensors from 50 V to 5000 V.

Infrastructures

- Traction substations AC or DC, passenger stations, charging stations, buildings, maintenance workshop...
- Control & signaling
- Signal cabins, automation equipment, preconditioning...



6 Electronic products & relays

- Time relays / measuring and monitoring relays
- Interface relays and optocouplers
- Analog converters
- Connection interfaces.

A full range of peripheral automation solutions for more efficiency.

Other ABB products:

- Traction substations
- Transformers
- Frequency converters
- Low-medium voltage switchgears
- Energy storage systems...



9 Safety products

Safety PLC Pluto a unique "All-master" safety PLC concept that simplifies the design of safety systems up to SIL 3 (EN 62061 and EN 61508).



10 Arc Guard System™ - TVOC-2

The Arc Guard System helps minimize the impact of an arc accident to save lives and equipment.



11 Terminal blocks

Screw clamp, PI-Spring and IDC technologies cover all connection needs for control and power distribution. From 0.22 to 240 mm².



12 Rail-mounted contactors

For "power" applications in fixed installations. R contactors are characterized by their simple, robust construction, and flexible combination.



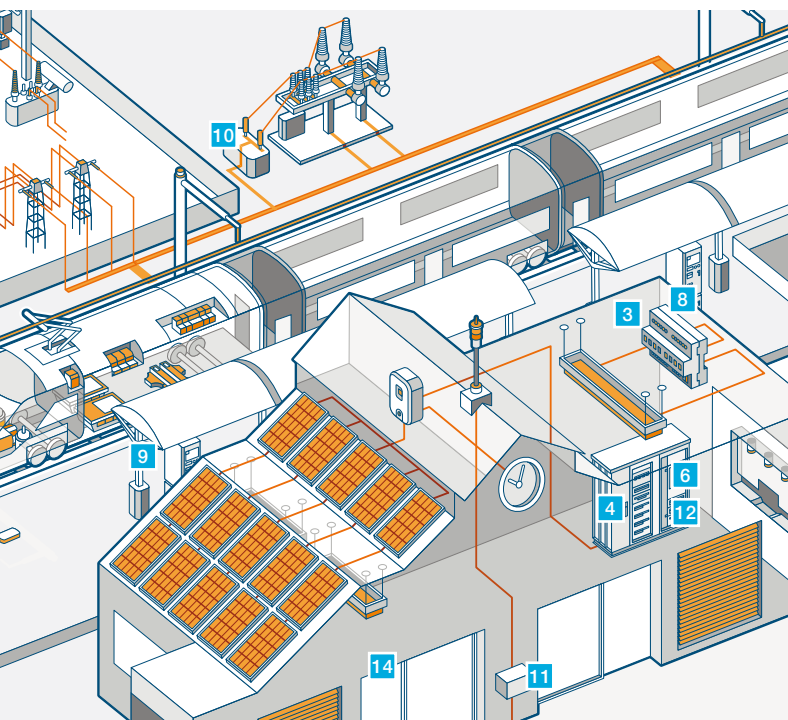
13 Cable Protection Systems

An electrical system is only as reliable as its conductors and our cable protection systems provide unsurpassed protection for wire and cables in the most demanding applications.



14 Emergency lighting

- Compact and weather resistant
- Cost efficient, low energy LED luminaires
- Modular in design for easy installation
- Enhanced light optics for market leading spacing.



7 Limit switches

LS Series

- Plastic or metal case
- Width: 30, 40, 60 cm
- Version IP67, connection by cable.



8 Pilot devices

- Compact range, fast assembly with only one item for the entire function
- Modular range, flexible to fit all needs.

Low voltage products for rolling stock equip



As part of our ongoing efforts to better satisfy your requirements, we develop and design solutions and products which are innovative, reliable, safe and easy to install.

By offering a wide range of innovative products for rolling stock applications such as: breakers, miniature circuit breakers, contactors, sensors, cable protection systems, electronic products and relays, etc. we offer you a solution for each of your applications and we contribute to increase the efficiency of your equipment.



1 Power circuit breakers

Tmax circuit breakers

- Molded case circuit breakers up to 800 A for applications in AC and DC
- Worldwide approved and recognized by train manufacturers.



4 Current & Voltage sensors

- Closed loop hall effect sensors
- CS type sensors from 100 to 2000 A
- Voltage sensors from 50 V to 5000 V
- Voltage detectors > 50 V visual warning.



2 Circuit breakers

Miniature circuit breakers

- S200MT/MTUC range up to 63 A with a wide range of accessories
- Complies with all main international standards.



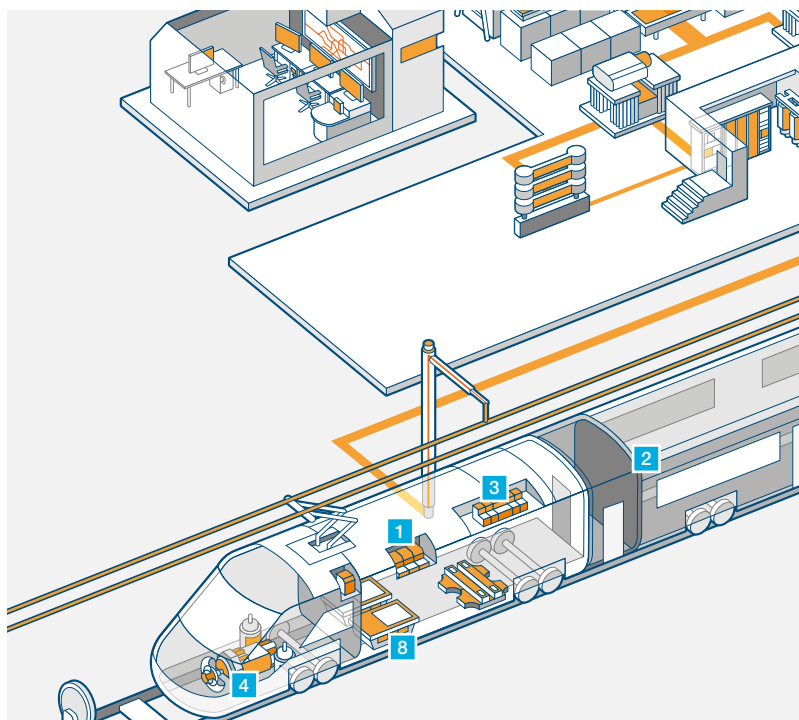
Residual current circuit breakers with overcurrent protection

- DS201T range up to 40 A
- Complies with all major international standards
- EN 45545; NFF (exigence 3); NF C 16-101...



High performance miniature circuit breakers

- S800 range up to 125 A and 50 kA breaking capacity
- Interchangeable terminals (cage or ring terminals) with a wide range of accessories
- Complies with all major international standards.



3 Electronic products & relays

- Time relays / measuring and monitoring relays
- Interface relays and optocouplers
- Analog converters
- Connection interfaces, etc.

A full range of peripheral automation solutions for increased efficiency.



5 Safety products

Safety PLC Pluto a unique "All-master" safety PLC concept that simplifies the design of safety systems up to SIL 3 (EN 62061 and EN 61508).

Rolling stock

- High speed train
- Light rail vehicle
- Regional train
- Metro
- Tram
- Locomotive
- Monorail.

System suppliers

- Power converter
- Auxiliary converter
- Heating ventilation
- Air conditioning
- Door
- Brakes
- Battery charger
- Master control unit.

Other ABB products

- Transformers
- Converters
- Auxiliary converters
- Motors
- Surge arresters
- Semiconductors.



6 Control and signalling accessories

- Pushbuttons
- Rotating knobs
- Indicator lights
- Switches.



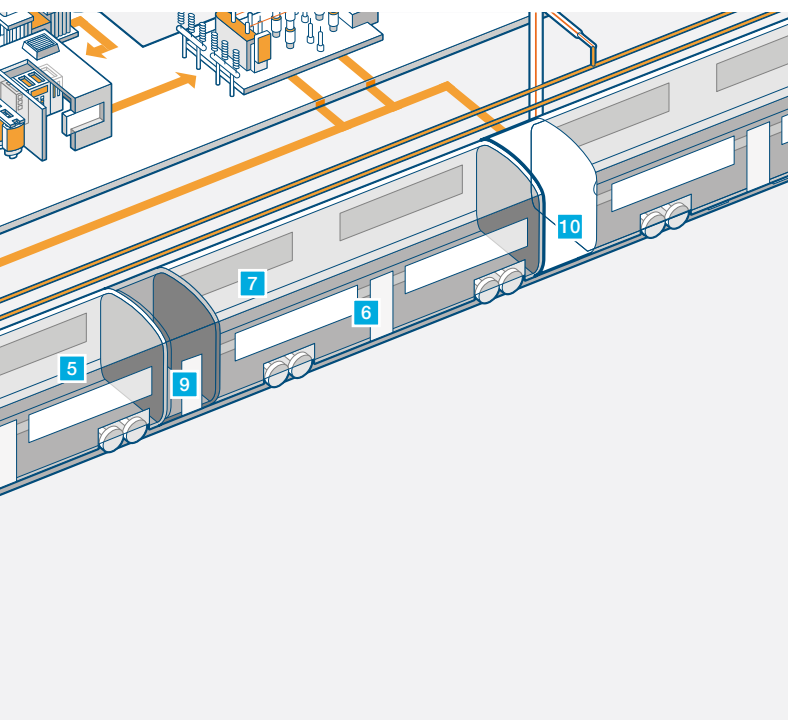
8 Contactors

AF.(Z)B contactors and NF(Z)B contactor relays have been developed in order to meet the specific requirements of rolling stock applications:

- Compact and modular design decreasing the space required in installations
- Light weight, resulting in less energy by axle
- Low coil consumption for energy saving
- Connection for ring tongue or standard ferrules
- Compliance to the latest rolling stock standards.

Our contactor range is available from:

- 5.5 to 160 kW, 400 V, AC-3
- 25 to 500 A, 690 V, AC-1, $\theta \leq 40$ °C.



9 Cable Protection Systems **PMA**

Over the last 30 years we have worked together with all the leading transportation corporations worldwide, providing specific design solutions for numerous applications:

- On the roof and under the carriages of rolling stock
- Air conditioning systems
- Inter-carriage jumpers
- Braking systems.



7 Terminal blocks

Four terminal blocks ranges dedicated to rolling stock

- ADO System® terminal blocks
- PI-Spring terminal blocks
- Quick connect terminal blocks
- Stud terminal blocks.

Terminal blocks rail assemblies

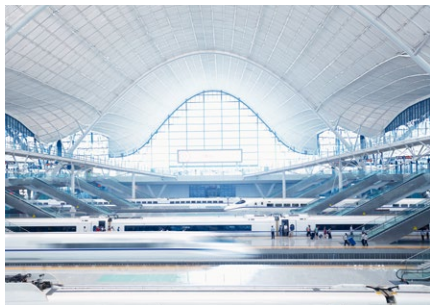
- Gain time and efficiency with pre-mounted rail assemblies ready to be installed.



10 Cable ties Ty-Rap

- Grip of steel non-magnetic stainless steel locking barb
- Excellent resistance against vibration & external shock
- Most extensive choice of special materials
- Wide range of size combinations & choice of colors
- Extensive range of approvals.

Join the ABB Low Voltage Products Rail Club!



Rail Club Low Voltage Products

Power and productivity
for a better world™



Register now!

on www.ourdoonline.com/railway/

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