ABB's Intelligent Transportation Solution
Safeguarding Your Journey Everyday
ABB's Intelligent Transportation Solution
Raise Efficiency, Ensure Safety, Improve Environment

Throughout modern transportation industries, ABB’s intelligent transportation solution can

Improve transport efficiency
Ensure traffic safety
Improve transport environment
ABB's Intelligent Airport Solution
Ensure Safety and Continuity, Improve Facility Management Level

ABB’s intelligent airport solution

- Keep facilities safe, fully realize facility smart management
- Real time switchgear condition monitoring based on mathematical model analysis
- Promptly identify potential failures and send out warning, extremely reduce unplanned power shutdown
- “Internet+” technology → Cloud Service → Remote expert system
- Mobile operation and maintenance management and switchgear asset management
ABB's Intelligent Airport Solution
iUniGear Smart Solution for MV Air Insulated Switchgear
ABB's Intelligent High Speed Railway Solution
Ensure Safety and Reliability, Improve Transport Environment

ABB’s intelligent high speed railway solution

- **Switchgear smart solution**
  - ZX1.5-R, 27.5 kV, traction power supply, gas insulated switchgear
  - ZX0 Air, 12 kV, auxiliary power supply, non-SF6 gas insulated switchgear
  - **Real time** switchgear condition monitoring
  - Promptly **identify potential failures and send out warning**, extremely reduce unplanned power shutdown
  - “Internet+” technology ➔ Cloud Service ➔ Remote expert system
  - **Mobile** operation and maintenance management and switchgear asset management

- **UniGear R27**, 27.5 kV, traction power supply, air insulated switchgear
- **FSKII+**, 27.5 kV, traction power supply, outdoor vacuum interrupter for railway
ABB's Intelligent High Speed Railway Solution
iGas Smart Solution for MV Gas Insulated Switchgear

iGas solution advantages

- Advanced gas density measuring technology
- Advanced non-interventional measuring technology
- Advanced mobile communication technology
- Advanced human-computer interaction technology

Circuit breaker characteristic monitoring
Pressure monitoring
Switchgear expert system
Motor circuit monitoring
Secondary circuit monitoring
ABB's Intelligent High Speed Railway Solution
ZX0 Air Non-SF6 Eco Efficient Gas Insulated Switchgear

Product advantages:

- Using **dry air** instead of SF6 as insulating medium, the **real eco-efficient solution**
- ZX0 Air solution has the **same**
  - Panel structure
  - Components (circuit breaker, current & potential transformer, cable terminal)
  - Technical parameter: 12 kV, 1250 A, 25 kA as alternative ZX0 SF6 solution
- SF6 detection equipment and ventilator are not needed for the room of switchgear
ABB's Intelligent High Speed Railway Solution
UniGear R27 Traction Power Supply Air Insulated Switchgear

Product advantages:
- Single phase AC 50 Hz system, internal arc classification AFLR 31.5kA 1s
- Reliable metallic partition and loss of service continuity category LSC 2B
- Imported vacuum interrupter and patented disconnector
- Optimized system solution and minimum panel footprint
ABB’s Intelligent Urban Rail Transit Solution
Ensure Safety and Reliability, Raise Transport Efficiency

ABB’s intelligent metro solution

- **GOOSE** smart selective trip solution
  - Full substation protection coverage without any delay
  - **Current mutant technology** improves the speed of logic judgment
  - **Self-inspection** technology for channels of facility and communication
  - System **self-recovery** technology
  - Backup power automatic switching solution

- **REF620** digital protection relay fully based on IEC61850 protocol standard
- **ZX2**, 35 kV, power supply, gas insulated switchgear
- **DCGear**, 1800 V, traction power supply, DC switchgear
- **UniGear 500R**, 12 kV, **tramway** power supply, fixed air insulated switchgear

Safety Reliability  Raise efficiency  Improve management
ABB's Intelligent Urban Rail Transit Solution
GOOSE Smart Selective Trip Solution

Solution advantages:

- Information integration protection, full substation protection coverage, perfect solution for time coordination problem between relays
- Relay action resolutions for both sensitivity and selectivity without any delay and skip-level action problems
- Save 40% secondary wiring, easy for wiring
- Dispense with wiring change when system change
ABB's Intelligent Urban Rail Transit Solution
DCGear DC Traction Power Supply Switchgear

Product advantages:

- **105 years, 48 countries, 7251 panels references**
- DC circuit breaker breaking performance (1.8 kV): **80 kA / 63 ms**
- **Ceramic arc chute** design for high speed circuit breaker, **maintenance-free** within life cycle
- Innovative **trolley design** for negative overvoltage protection device panel, ease of maintenance
ABB's Intelligent Port and Marine Solution
Ensure Safety and Reliability, Improve Transport Environment

ABB’s intelligent port and marine solution

- **Switchgear smart solution**
  - Reduce the space up to 30%
  - Reduce secondary wiring up to 40%
  - Sensor standardization, reduce spare parts up to 70%
  - **Widely measured range** of sensor, suitable for different loads
  - No iron coil design, **avoid the risk of ferroresonance**
  - **Green** solution

- **UniGear ZS1/550 Marine** 12 kV air insulated switchgear for Marine market

UniGear ZS1 Marine
iUniGear smart solution for MV AIS
UniGear 550 Marine

Safety
Reliability

Improve
environment

Improve
management
Product advantages:

- No iron coil design, **avoid the risk of ferroresonance**
- **Widely measured range** of sensor, suitable for different loads
- Sensor standardization, reduce spare parts up to **70%**
- Reduce secondary wiring up to **40%**
- **Green** solution
Power and productivity for a better world™