
Enviline™ DCGear

DC Switchgear for DC traction power distribution networks



Enviline DCGear – DC Switchgear

Enviline DCGear is designed for power supply systems used with:

- Light rail system (600 V)
- Urban metro (750 V, 1500 V)
- Railways (3000 V)

Modern construction, flexibility and high-end design of our Enviline DCGear are result of ABB's long-standing track record in the design and supply of DC traction substations.

Enviline DCGear is equipped with Gerapid high speed DC circuit breakers and is designed for protection of main DC circuits at traction power substations. Gerapid breakers are well known and recognized globally as one of the best breakers in the market.

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Key benefits

Enclosed construction

Designed for railway applications in harsh environments. Freestanding rigid metal enclosed cubicle with separate screened compartments.

Proven design

Use of proven technology components, such as DC high-speed circuit breakers type Gerapid. Full compliance with IEC and EN standards.

Flexibility

Variety of panels in different configurations for various applications.

Low maintenance

Front access for low maintenance and reduced wear-and-tear of main contacts of the DC HSCB Gerapid.

Safety

High active and passive safety for operation and maintenance personnel.

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Key features

- Allows for operation in service-free and remote monitoring substations;
- 100% stand-by capacity for traction line power supply by using the bypass busbar system with stand-by breaker, which can replace any other feeder breaker
- Digital and modular DC protection relay with highly customized functions
- High level of operational safety
- Wide variety of blocking and safety electric-mechanical interlocks that protect against incorrect handling or fatal operations.

Specifications

Feeder panel 750 V

Technical data	Enviline DCGear 750V
Normal voltage	750VDC
Highest permanent voltage	900VDC
Power frequency withstand voltage, 50Hz, 1min	3,6kV
Rated service current	up to 6 kA
Main busbar current	up to 9 kA
Rated short time withstand current	up to 125 kA
Protection degree	IP21/31
Internal fault resistance	50kA 150 ms
Dimensions in mm (WxDxH)	600 x 1500 x 2300
Ambient temperature range	-5–40° C
Standards	EN50123-6, IEC61992-6

Feeder panel 1500 V

Technical data	Enviline DCGear 1500V
Normal voltage	1800VDC
Highest permanent voltage	3000VDC
Power frequency withstand voltage, 50Hz, 1min	9,2 kV
Rated service current	up to 6000A
Main busbar current	up to 10000 A
Rated short time withstand current	up to 80 kA
Protection degree	IP21/41
Dimensions in mm (WxDxH)	600x1500x2300
Ambient temperature range	-5–40° C
Standards	EN50123-6, IEC61992-6

Feeder panel 3kV

Technical data	Enviline DCGear 3000V
Normal voltage	3000VDC
Highest permanent voltage	3600VDC
Power frequency withstand voltage, 50Hz, 1min	11,5 kV
Rated service current	up to 4 kA
Main busbar current	up to 6 kA
Rated short time withstand current	50 kA
Protection degree	IP21/31
Dimensions in mm (WxDxH)	Various
Ambient temperature range	-5–40° C
Standards	EN50123-6, IEC61992-6

Enviline

Reliability and efficiency on track

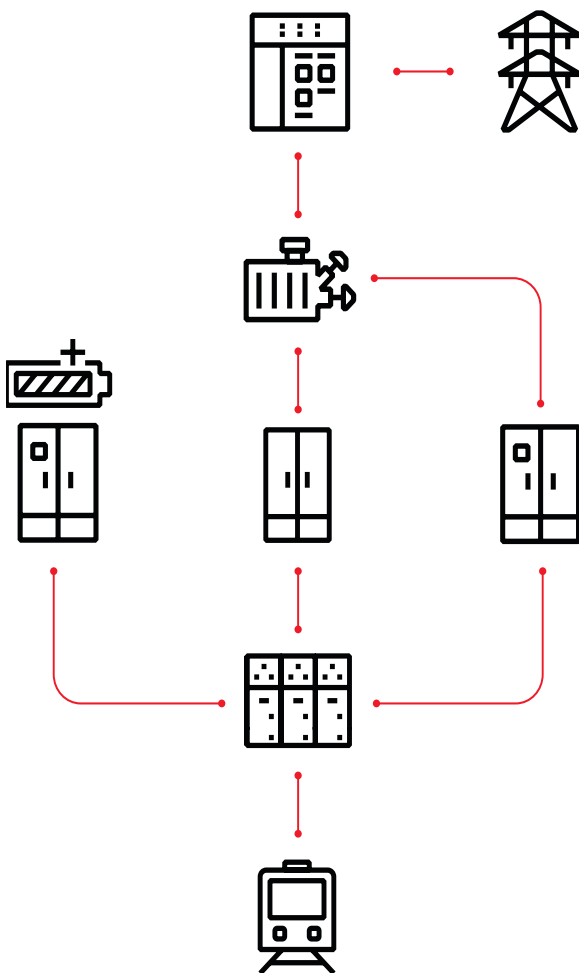


ABB – A single source supplier

Comprehensive product portfolio covering all functional requirements.

- Primary and secondary medium-voltage switchgear
- Rectifier and auxiliary transformers
- Diode rectifiers
- Controlled rectifiers and inverters
- DC switchgear
- Substation automation
- Energy management systems

Within the Enviline product family, the following ranges are available:

Enviline TCR/TDR/WDR	Traction controlled rectifier/ Fixed diode rectifier/ Withdrawable diode rectifier
Enviline ESS	Energy Storage System
Enviline ERS	Energy Recuperation System
Enviline ARU	Automatic Receptivity Unit
Enviline VLD	Voltage Limiting Device
Enviline DCGear	DC switchgear

Service

Our global network provides you with tailor-made services for the Enviline product family. The broad range of services include spare parts, maintenance, upgrades and retrofit. A customized bundle of services is available based on your operating needs and demand, or in a multi-year service level agreement.

We are committed to supporting you throughout the process improving operational efficiency and providing performance improvement to your assets. With the knowledge gained from our vast experience in the railway industry, we are very conscious of the importance of maintaining the safety and reliability of railway systems.

Additional information

We reserve the right to make technical changes or modify the contents of this document without prior notice. With regard to purchase orders, the agreed particulars shall prevail. ABB does not accept any responsibility whatsoever for potential errors or possible lack of information in this document.

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