

MEDIUM VOLTAGE PRODUCTS

DC eHouse

Direct Current Electrical Substation



Customized walk-in metal enclosure specifically built to protect the electrical equipment in your DC Railway substation.

Technical features of the products

Designed to all the applicable standards, the DC eHouse is designed for multimodal ease of transportation. The outer steel enclosure is insulated with appropriate mineral wool material, anti-static PVC and Zinc-coated surfaces. A typical DC Railway eHouse substation would include a medium voltage switchgear, a transformer-rectifier group, a DC switchgear, an uninterruptible power supply (UPS) and associated control panels. Optionally, an integrated climatecontrol system can be included. ABB can manufacture, outfit and deliver the equipment to any customer specific requirements.

Customer benefits and savings

- Risk Mitigation: Transfer of risk from client to ABB for coordinating design interface of all elements in the package to form a single product solution.
- Reduced Client Resources: ABB being responsible for the scope of works described above reduces client manpower to engineer and manage the project.
- Predictable Delivery and Cost Schedule: As a majority of the work is performed off site, the client is insulated from local labor shortages, environmental and industrial relations factors, granting fewer and shorter isolation possessions.
- Reduced Site Resources: Comprehensive FAT can be performed before delivery reducing site commissioning requirements.
- Simplified Commercial Agreement: Single contract for the entire package, reducing requirements for multiple commercial agreements.
- Scalable Solution: Efficient design to accommodate scalable increase of installation demand/capacity.

AC eHouse product picture

Product description

DC eHouse is a prefabricated walk-in modular outdoor enclosure to house a medium voltage (MV) switchgear, a transformer-rectifier group, a DC switchgear and low voltage equipment as well as auxiliary equipment for your DC Railway applications. It is ready to operate in the field with minimum installation, commissioning and start up time - as an alternative to traditional on-site building construction (concrete block, brick construction or similar).

They are ideally suited for any project where there is a need to reduce on-site work, especially in remote areas where qualified personnel is sometimes not available and all labor is expensive and difficult to manage.

ABB has combined its extensive experience with eHouses and its DC products knowledge to create this customizable medium-voltage DC railway eHouse product.

The typical equipment list used for DC eHouse can be adapted to the customer's needs.

Item No.	Description	Width (mm)	Depth (mm)	Height (mm)
1	2300 kVA 20 kV/0.650 V/0.650 V 3 ph, 3 w, 50 Hz Transformer	2475	1270	2440
2	24 kV, 3 ph, 1250 A, 31.5 kA Air-Insulated Medium Voltage Switchgear (ZS1)	3260	1340	2530
3	12-pulse rectifier Return Panel & DC Switchgear	2800	1800	2150
4	UPS & Battery Panel	550	750	1800
5	Control Panel & RTU	1000	1000	2000

AC Switchgear (UniGear ZS1)

Single line diagram for the typical layout

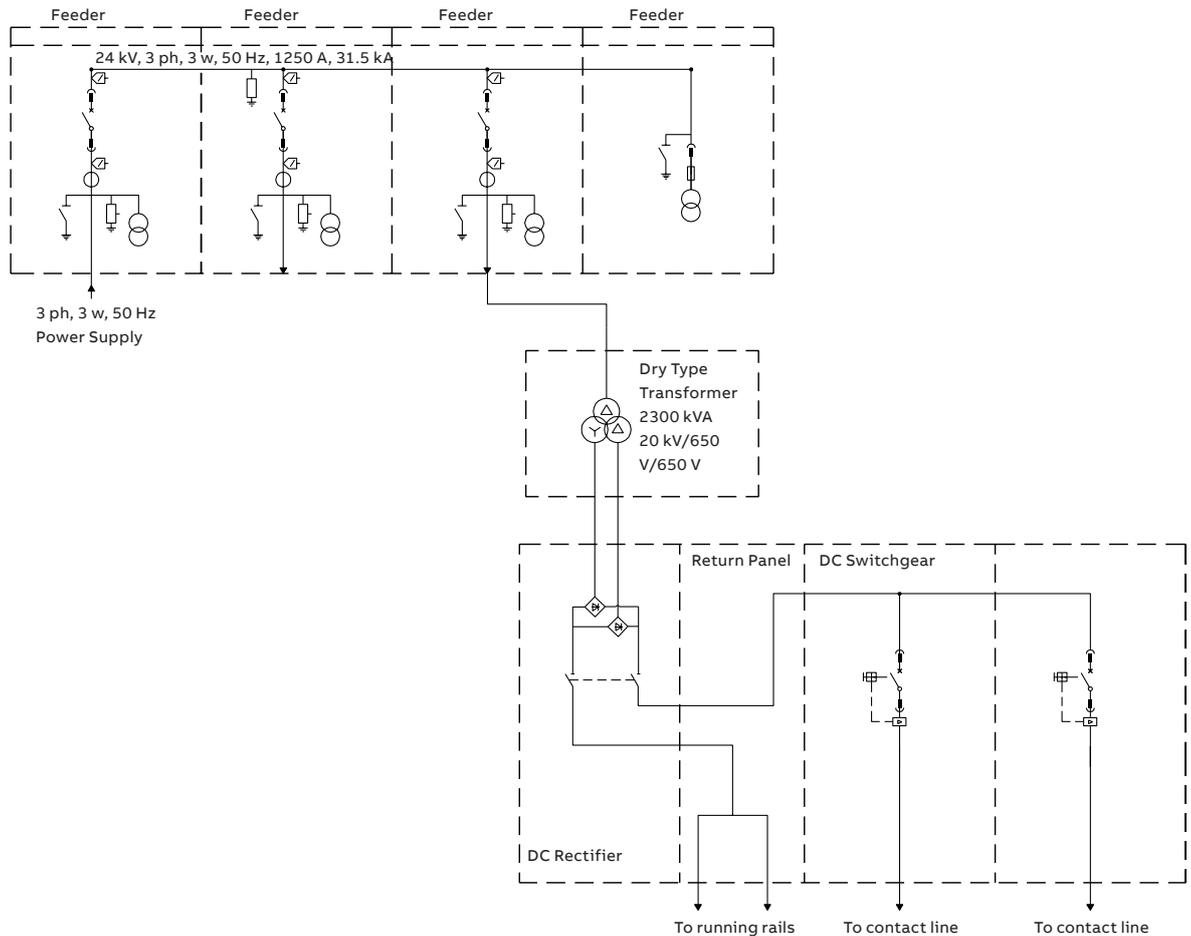


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