

MEDIUM VOLTAGE PRODUCTS

AC eHouse

Alternating Current Electrical Substation



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

01 AC eHouse product picture

Product description

AC eHouse is a prefabricated walk-in modular outdoor enclosure to house a selection of different medium voltage (MV) switchgear and an auxiliary equipment for your AC 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 AC products knowledge to create this customizable medium-voltage AC railway eHouse product.

Technical features of the products

Designed to all the applicable standards, the AC 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 AC Railway eHouse substation would include a medium voltage switchgear UniGear R36, UniGear40 or UniGear ZX1.5R and associated control panels. Optionally, an integrated climate control system can be included. ABB can manufacture, outfit and deliver the equipment to any customer specific requirements.

UniGear R36 / R40

ABB UniGear R is a metal clad arc-proof construction and withdrawable design. It features an Arc resistant design IAC AFLR 40 kA, 0.5 second (16.7 Hz) for R36, IAC AFLR 25 kA, 1 second (50 Hz) for R40, manufactures according to IEC 62271-200 with single busbar system plus Vacuum breaker type-tested according to EN 50152-1. Every cubicle is divided into various compartments both for power equipment (Busbar, circuit breaker, cable compartment) and for auxiliaries (low voltage compartment), which are segregated by metal partitions.

UniGear ZX1.5R

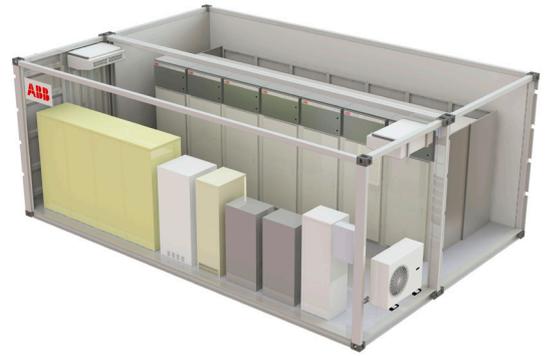
ABB UniGear Zx1.5-R is a double busbar system for single and two phase 27.5 kV applications. Independent gas compartments for the circuit-breaker and the three position disconnecter with individual busbar compartment for each panel of the switchboard plus fully sealed, factory tested panel, delivered filled of gas.

Other features are;

- (1) Connection of the power cable with plug-in system. Up to 4 sockets type 3 per phase.
- (2) Busbar assembly between adjacent panels with plug-in system.
- (3) Integrating overpressure relief ducts, and tested according to IEC 62271-200 for AFLR 31.5 kA, 1 second classification.

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 & Cost Schedule: As a majority of the work is performed off site, the client is insulated from local labor shortages, environmental & industrial relations factors, granting fewer and shorter isolation possessions.
- Reduced Site Resources: Comprehensive FAT can be performed before delivery reducing site commissioning requirements.



Product characteristics AC eHouse

Switchgear	UniGear R36			UniGear R40			UniGear ZX1.5R		
	L	W	H	L	W	H	L	W	H
Internal (mm)	8101	5439	3100	8101	5438	2910	7562	4676	3153
External (mm)	8411	5638	3397	8411	5638	3207	7872	4876	3450

AC Switchgear (UniGear R36)

— Typical single line diagram example for UniGear R36 switchgear

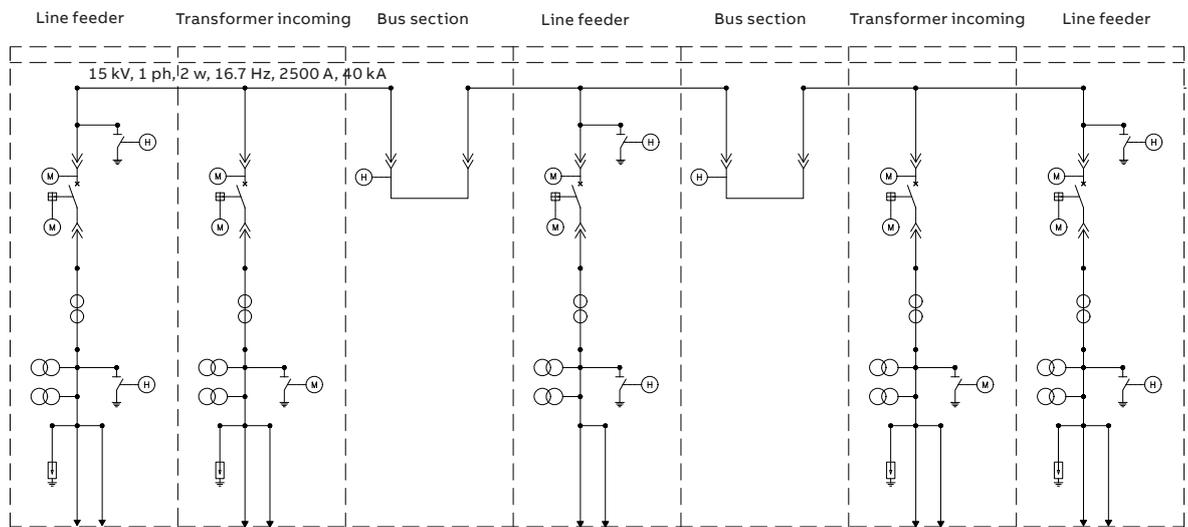


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