

Retrofitting

Universal module: Solution for CB retrofitting in non-ABB panel



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12kV Universal module

Concept

Universal module comprises a cassette that hosts a standard circuit-breaker connected to the existing switchgear by an adaption system.

The adaptation system allows a completely standard ABB withdrawable apparatus to be fitted to the original switchgear. The result is a great improvement in reliability, safety, maintenance and performance.

ABB Service is a complete system provider of retrofitting solutions, from proposal to design, manufacturing and testing, down to installation and commissioning.

Benefits

Maintenance and repair aspect

- The new apparatus mounts all standard spare parts with all the benefits in terms of delivery time and price
- Equipment and spare parts are interchangeable with new ABB extension panels (UniGear) and additional switchgear
- Same operational interface and maintenance approach for the equipment installed in universal module and new ABB panels

Circuit breaker retrofitting is a cost-effective alternative to complete switchgear replacement. ABB Service experts conduct site audits on existing installations to assess the condition of the equipment, recommend the most suitable solution and technically support the most appropriate investment.

Retrofill is one of the retrofit technical solution used by ABB. Universal module is the latest ABB retrofill design concept in order to easily connect the new breaker to a wide range of existing non-ABB panels.

Modernization process

- The use of standard breakers makes them ready without any modification for future ABB replacement switchgear, providing an optimized investment for the next substation renewal

Ease of use and robust

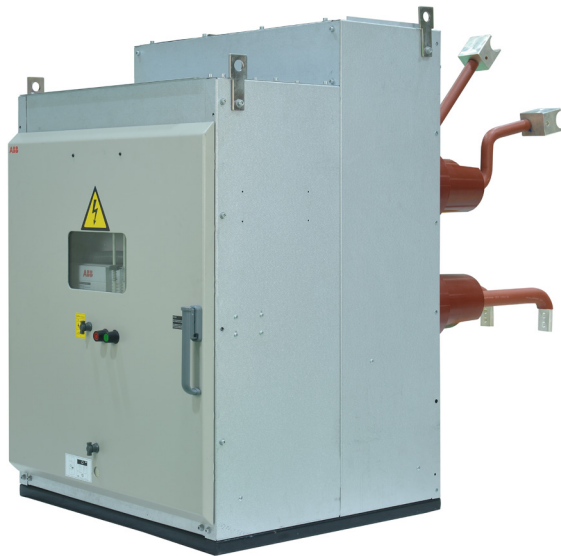
- CB mechanical push buttons accessible from front door
- Single shot handle for the door
- Robust structure with Aluzinc sheets
- Inspection window of toughened glass
- Mechanically stiffened door with padlocking facility

Safety upgraded

- The original shutter system and all the relevant interlocking are replaced with new standard ones installed from the factory on the universal module
- Shutter and circuit breaker movement are interlocked to enable all necessary safety features
- Option for remote racking of apparatus
- Optionally integrated with temperature monitoring sensors near apparatus spouts

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36kV Universal module
03 Original panel
04 Modernization with
Universal module

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Technology

- Universal module solutions are fully type tested according to IEC standards

What’s needed for a quote?

The following basic details are necessary for providing standard retrofit solutions offer:

- Pictures of switchgear and breaker labels
- Pictures of switchgear and breaker
- CB compartment inner pictures
- Inner dimensions of CB compartment
- Required quantities

How long it takes to modernize?

6 to 8 hours site work

Technical data

Rated voltage	[kV]	7.2	12	36
Rated power frequency withstand voltage	[kV 1 min]	20	28	70
Rated lightning impulse withstand voltage	[kVp]	60	75	170
Rated frequency	[Hz]	50	50	50
Rated short time withstand current	[kA 3 s]	...40	...40	...31.5
Peak current	[kAp]	...100	...100	...78.75
Rated current (40°C)	[A]	1250	1250, 1600, 2000, 2500, 3150 ¹⁾	1250

¹⁾ With forced cooling



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