

MEDIUM VOLTAGE SWITCHGEAR

SafeGear® HD

5/15 kV, 63 kA arc-resistant high duty switchgear



ABB's ANSI platform for high duty arc-resistant switchgear features a 0.5 second 63 kA arc withstand time for increased safety considerations in medium voltage switchgear.

SafeGear® HD also features Type 2B accessibility per IEEE C37.20.7, a small footprint, two-high configuration, and a three-way vent flap system to ensure safety of personnel working on or around the gear. In addition, SafeGear HD is seismic-certified to IBC Seismic Region D.

Product highlights

- Fully compliant to ANSI C37.20.2-1999 for switchgear construction and IEEE C37.20.7-2007 for arc-resistant testing at 0.5s arcing time withstand
- Type 2B accessibility rating
- All bus primary insulation is high strength epoxy
- ADVAC 63 kA breaker fault clearing duty time is max 50ms (3-cycle)
- Closed door PT and CPT fuse drawout racking
- Available SmartRack™ remote racking system, capable of racking the breaker and PT and CPT fuse drawout units
- UL and CSA certified
- Multi-point front door latch with single, easy-to-use padlockable handle
- Dual secondary disconnect plugs operate without opening the front door

- Externally flanged plenum design for ease of installation
- Foot-operated hydraulic lift truck
- Designed to be used with the ABB drawout I_s-limiter for ratings exceeding 63 kA
- SwitchgearMD™ temperature, humidity and partial discharge (PD) monitoring
- Digital version available

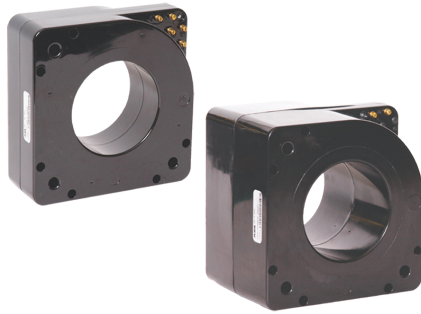
Voltage class	FLC (amps)	Isc (kA)	BIL (kV)	Hi-pot (kV, rms)
5/15 kV	1200 A	50/63	95	36
	2000 A	50/63	95	36
	3000 A	50/63	95	36
	4000 A*	50/63	95	36

* Forced air cooled

Arc flash venting

SafeGear HD has a three-way, spring-loaded vent flap system that vents through the center of the switchgear and does not require additional space for side-mounted venting chimneys. The system vents through 57" chimneys, straight to the plenum, and out of the building to a safe distance.

- 01 Current transformers
- 02 ADVAC breaker
- 03 Voltage transformers



01



02



03

Small footprint

Similar to the SafeGear platform, SafeGear HD is among the smallest footprints in the industry with a standard 36" frame and 5/15 kV. SafeGear HD with plenum requires only a distance of 129.5" minimum, floor to ceiling, for clearance of the vent box handle. This allows for lower PDC heights, which is a direct cost saving.

63 kA ADVAC breaker

The ADVAC series is a complete line of ANSI-rated vacuum circuit breakers offering power distribution system customers the latest technology advantages to reduce ownership costs through improved reliability and maintainability. Maintenance costs are further reduced due to vacuum interrupter and contact designs that wear less than 1 mm during the lifetime of the breaker.

Instrument transformers

Current transformers

SafeGear HD is designed and tested for use with the SAB-1/1D current transformers for 1200 and 2000 A applications, and the SAB-2/2D current transformers for 3000 A and 4000 A applications. These CTs are used for voltage ratings of 5, 7.5 and 15 kV and are located on the breaker primary bushings.

15 kV voltage transformers

For 8.25 – 15 kV applications, SafeGear HD is designed and tested for use with the VIZ indoor voltage transformers.

The VIZ-75 and VIZ-11 indoor voltage transformers are fused and used for metering or relaying applications. Both units are available in single, double and tapped secondary designs, with two accuracy and thermal rating options.

5 kV voltage transformers

For 5 kV applications, SafeGear HD is designed and tested for use with the VIY-60 indoor voltage transformers.