Advance® is ABB’s ANSI platform for 5-15 kV rated metal-clad switchgear featuring a competitive footprint and designed and tested per IEEE C37.20.2. Featuring galvanized steel construction, hem bending techniques, and Delrin arc-quenching auxiliary contacts, Advance is designed with safety, reliability, and flexibility in mind. Advance is seismic-certified to IBC Region D.

**Product highlights**
- Fully compliant to IEEE C37.20.2-1999 for metal-clad switchgear construction
- Interruption ratings of 25-63 kA, continuous current ratings of 1200-3000 A naturally cooled and 4000 A FAC
- Closed door PT and CPT racking
- Standard 36-inch wide, 85/92-inch deep, 95-inch tall frame for one-high and two-high configurations
- SmartRack® remote racking system for breakers, PT and CPTs
- UL certified, CSA available
- Automatic secondary disconnects
- Available top and bottom cable or bus duct entry
- Advanced options for 24x7 monitoring
- Digital switchgear solutions
- Active arc mitigation solutions

**Delrin arc-quenching auxiliary contacts**
Delrin arc-quenching contacts are used for PT and CPT contacts. The recessed contact design also eliminates the need for safety shutters as access to live bus is very difficult.

**Galvanized steel construction**
Advance is built using galvanized steel construction for increased protection from rust, scratches, and corrosion, and offers increased illumination properties allowing for better instrument viewing.

**Advance accessories**
- Racking crank
- Test cabinet and test jumper
- SmartRack® electric racking device
- Lift truck
- Ground and test devices

**Available configuration/competitive footprint**
Advance features the most competitive footprint in the market with available two-high configurations. Each switchgear frame measures 36 inches wide, 85 or 92 inches deep and 95 inches tall regardless of one or two-high. Each frame includes a separate isolated low voltage compartment that separates relays, meters and other instruments, protecting personnel from exposure to high voltage.

**Advance options**
- IR viewing ports; ground studs; lightning arresters
- SwitchgearMD™ 24x7 monitoring
- Outdoor non-walk-in and sheltered aisle enclosures
- Utility metering compartments
- Digital switchgear with current and voltage sensors and 61850-based communication
- Ultra Fast Earthing Switch (UFES™)
- Generator circuit breakers
- Fault current limiting devices
AMVAC™ breaker
The industry’s number one ANSI MV magnetically-acutated breaker comes standard with a 5-year warranty. The AMVAC breaker has the lowest total cost of ownership of any breaker available in the market.

ADVAC® breaker
The ADVAC series is the most user-friendly line of ANSI-rated vacuum circuit breakers with a spring-charged mechanism. These breakers use proven technology and require the least maintenance and lowest cost of ownership of all spring-charged breakers.

ADVAC® G generator circuit breakers
ABB offers breakers designed for use in generator protection applications. These breakers have been designed and tested to meet or exceed the requirements of the new dual standard IEC62271-37.013. They provide protection of system-fed, generator-fed, and out-of-phase fault conditions for power generator transformer blocks in utility and industry power distribution systems.

Active arc mitigation
Advance can be equipped with the latest active arc mitigation equipment, such as the Ultra Fast Earthing Switch (UFES) and Relion® REA arc detection. These devices can significantly reduce the incident energy levels, increasing personnel safety and decreasing equipment damage and down time.

Instrument transformers
Current transformers: Advance is designed and tested for use with the ABB SAB-1/1D, -2/2D current transformers for 1200-4000 A applications.

Voltage transformers: The VIY-60, VIZ-75 and VIZ-11 indoor voltage transformers are designed for service in metal-clad switchgear and are used for metering, relaying, or control power. All units are available in single, double, and tapped secondary designs with high accuracy and thermal rating options.

Distribution automation
The Relion 615 and 620 family of protection and control relays for distribution applications and advanced automation solutions with products such as the COM600, provides the performance, safety, and ease-of-use that switchgear specifiers and users demand.

Asset health monitoring
SwitchgearMD provides bus temperature, partial discharge and humidity monitoring of the switchgear. With 24x7 data availability and remote monitoring capability, it adds value through reduced total cost of ownership and enhanced personnel safety.

### Characteristics

<table>
<thead>
<tr>
<th>Characteristics</th>
<th>Unit</th>
<th>Rated maximum voltage level*</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>5 kV</td>
</tr>
<tr>
<td>Rated nominal voltages</td>
<td>kV</td>
<td>2.4, 4.16, 4.8</td>
</tr>
<tr>
<td>Main bus continuous current</td>
<td>A</td>
<td>1200, 2000, 3000, 4000**</td>
</tr>
<tr>
<td>Short circuit current (rms)</td>
<td>kA</td>
<td>25, 31.5, 40, 50, 63</td>
</tr>
<tr>
<td>Rated frequency</td>
<td>Hz</td>
<td>50, 60</td>
</tr>
<tr>
<td>Low Frequency Withstand (rms)</td>
<td>kV</td>
<td>19, 36, 36</td>
</tr>
<tr>
<td>Impulse level (BIL, crest)</td>
<td>kV</td>
<td>60, 95, 95</td>
</tr>
</tbody>
</table>

* Ratings given are for service conditions within temperature and altitude limitations as defined by IEEE C37.20.2-2015 metal-clad switchgear standard.

** 4000 A is forced-air cooled.

Ratings shown are for usual service conditions. For 27 kV applications, reference Advance 27 documentation IVAL107001-FL.