

MEDIUM VOLTAGE SWITCHGEAR

## SafeGear®

### Medium voltage arc-resistant switchgear



SafeGear® is an arc-resistant, metal-clad switchgear that ensures maximum safety and operational reliability during arcing events that may expel hazardous materials and hot gases.

SafeGear® provides maximum safety and operational reliability during arcing events. Arc-resistant switchgear offers operators and equipment the highest standard of protection during an arc fault.

- Vents and flaps are located on top of the enclosure to release the pressure into the plenum. This significantly reduces operator risk during maintenance and operation of the equipment
- SafeGear's level of arc resistance helps protect workers from the catastrophic effects of an internal arc fault, and also protects nearby equipment from collateral damage
- More than 30 years experience in arc-resistant switchgear
- First manufacturer of two-high arc resistant switchgear; the ABB design allows for flexibility in configurations and promotes superior safety performance
- Small arc-resistant footprint allows ABB switchgear to fit into tighter spaces
- Large arc-resistant viewing window allows the operator to check position and status of circuit breaker without opening the cell door
- Available in ratings up to 15 kV, 4,000 Amps, 50 KAIC with 0.5s arcing duration

#### Types of arc-resistant gear

- Type 2: provides arc flash protection in front, sides, and rear of switchgear line-up
- Type 2B: provides arc flash protection as Type 2 plus isolates the LV compartment when the door is open
- Type 2C: provides arc flash protection as Type 2 plus compartment to compartment protection

#### Additional features and options

- Closed door racking
- Remote breaker racking
- Single handle, multi-point latch front doors
- Automatic secondary disconnects
- REA Relay:
  - Reduce incident energy by up to 80%
  - Helps meet OSHA, IEEE, NFPA and NEC standards
  - Can reduce Personal Protective Equipment (PPE) requirements for easier maintenance
  - Can be used with any manufacturer's relays and requires no re-programming or setting changes

| Characteristics               | Unit | Rated maximum voltage level* |               |                    |
|-------------------------------|------|------------------------------|---------------|--------------------|
|                               |      | 5 kV                         | 8.25 kV       | 15 kV              |
| Rated nominal voltages        | kV   | 2.4, 4.16, 4.8               | 4.8, 6.9, 8.2 | 6.9, 7.2, 8.4, 11, |
| Main bus continuous current   | A    | 1200, 2000, 3000, 4000**     |               |                    |
| Short circuit current (rms)   | kA   | 25, 31.5, 40, 50             |               |                    |
| Rated frequency               | Hz   | 50, 60                       |               |                    |
| Low frequency withstand (rms) | kV   | 19                           | 36            | 36                 |
| Impulse level; (BIL, crest)   | kV   | 60                           | 95            | 95                 |

\* 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.

SafeGear arc-resistant switchgear eliminates the need for costly and cumbersome PPE required for performing normal operating procedures, thereby improving operational efficiency and reducing total cost of ownership.



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