Grid Solutions

FKG2M

Generator Circuit Breaker for Power Plants from 100 to 200 MW*

Power plant owners are concerned with the availability and reliability of their plants. That is why it is crucial to rely on equipment capable of safely interrupting fault conditions while protecting connected equipment and reduce outage periods.

Higher Reliability

FKG Generator circuit breakers are equipped with a fully spring-operated mechanism for high reliability, maximum energy stability and low maintenance requirements. This model is equipped with a natural cooling system, consisting of an external heat exchanger using natural convection phenomena for SF_6 cooling.

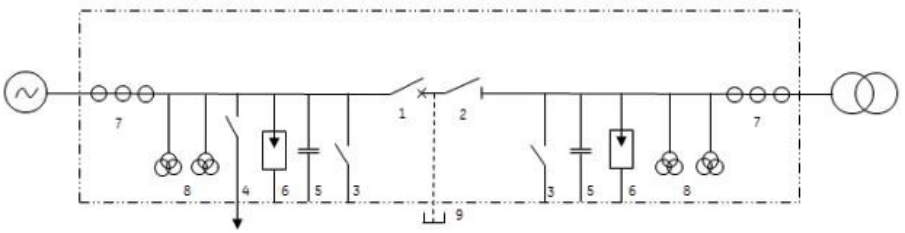
Keep an Eye on your Generator Circuit-Breaker

The FKG2M figures out optional add-on CBWatch monitoring system (automatic diagnosis) for maintenance on real status of the switchgear.

Higher Safety

A true electro-mechanical sequential interlocking system assures a reliable mechanical and electrical coordination for higher safety.

Components and Single Line Diagram



1 - Circuit breaker
2 - Disconnector
3 - Earthing switch
4 - Starting switch
5 - Capacitors
6 - ZnO Surge arresters
7 - Current transformers
8 - Voltage transformers
9 - Manual short-circuiting bar

Technical Data

- 8,400 A - 80 kA - 50 Hz
- 8,200 A - 80 kA - 60 Hz

Key Benefits

- Utmost reliability of the full spring mechanism
- CBWatch makes proactive maintenance possible
- Interrupting chambers with natural cooling system
- Ideal for small & medium turbines or generators

Testing and Quality

- Product in full compliance with IEC/IEEE 62271-37-013 GCB standard
- Manufacturing ISO 9001 and ISO 14001 certified
- S.E.I. - S.N.E. and national packing procedures

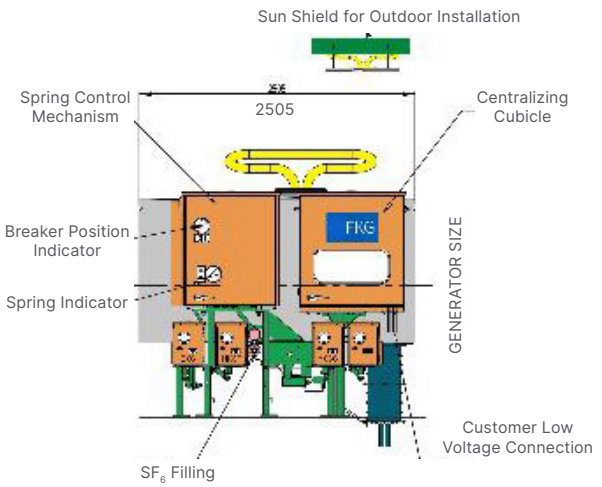
GE VERNOVA

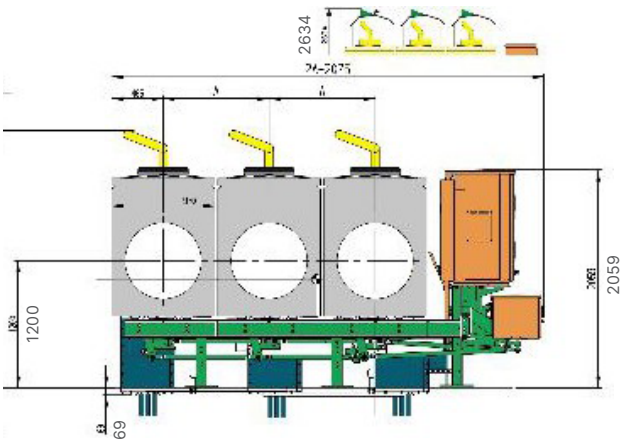
** Depending upon the power station's specifications, GE Vernova may propose an alternative GCB power rating.*

Technical Specifications

		FKG2M			
Rated maximum voltage	kV	17.5/24			
Short-circuit breaking current	kA	up to 80/63			
Rated out-of-phase breaking current	kA	40/31.5			
Rated breaking time	ms	50			
Rated closing time	ms	115			
Insulating gas		SF_6			
Rated absolute pressure at 20°C	kPa	850			
Minimum absolute pressure at 20°C	kPa	710			
Location		Indoor/Outdoor			
Breaker cooling type		Natural			
Ambient air temperature limits	°C	-25°C/+40°C			
Bus bar temperature limit/Enclosure temperature limit	°C	90/70°C		105/80°C	
Frequency	Hz	50	60	50	60
Maximum rated normal current (natural cooling) - Indoor with ambient air 40°C - Outdoor with ambient air 40°C	 A A	 8,400 8,150	 8,200 7,950	 7,900 7,650	 7,700 7,400
Phase spacing A with 100 mm step	mm	1,000 to 1,500			
Protection degrees (enclosure/cubicles)		IP65/IP55			
SF_6 monitoring by densimeter		3-phase			
Pressure reading		Yes			
		FKG2M	**SKG2 Disconnector**	**MKG2 Earthing Switch**	**IKG2 Starting Switch**
Rated peak withstand current	kApeak	220/173	220/173	220/173	173
Rated short time withstand current	kA	80/63	80/63	80/63	63
Rated duration of short-circuit	s	3/3	3/3	2/3	1
Rated insulation level (at sea level) - Phase to earth - Rated power frequency withstand voltage - Rated lightning impulse withstand voltage: wave 1,2/50 µs	 kV kVpeak	 60 125	 60 125		 30 60
Rated insulation level (at sea level) - Across terminals - Rated power frequency withstand voltage - Rated lightning impulse withstand voltage: wave 1,2/50 µs	 kV kVpeak	 60 125	 70 145	 60 125	 60 125

Dimensions





For more information, visit
gevernova.com/grid-solutions

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