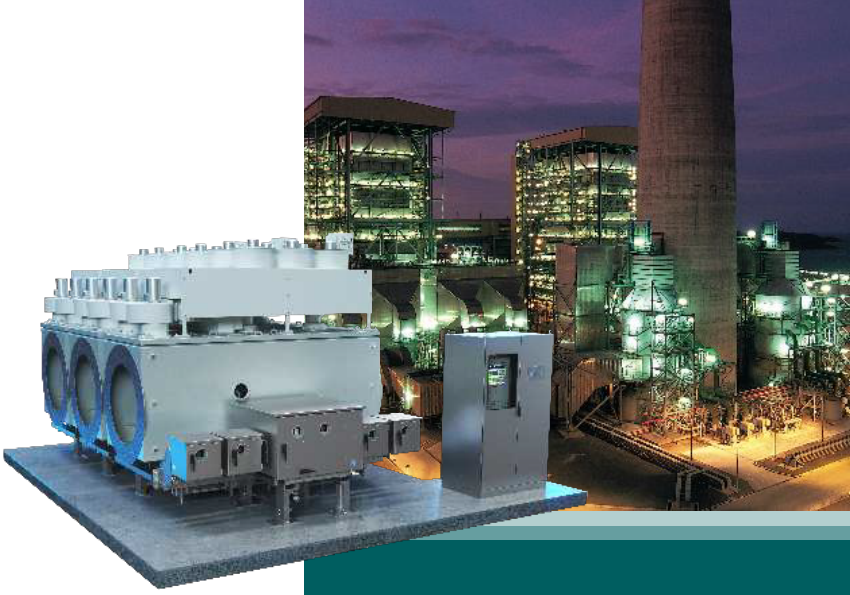
Grid Solutions



FKG1XV

Generator Circuit Breaker System for Power Plants from 750 to 900 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 additional fans to increase thermal exchanges.

Keep an Eye on Your Generator Circuit-Breaker

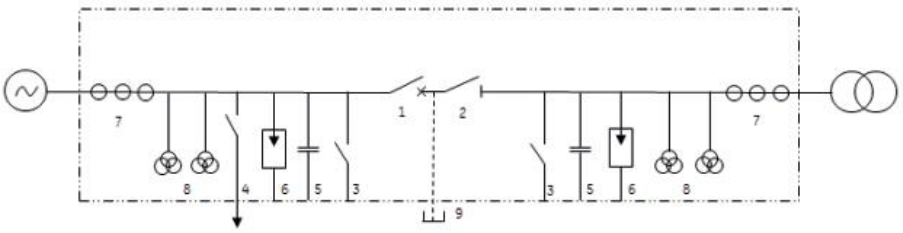
The FKG1XV includes a smart cooling digital solution to optimize in real time the ventilation system and retrieve main GCB information through industrial network communication or local Human Machine Interface.

In addition: The FKG1XV figures out optional add-on CBWatch monitoring system (automatic diagnosis) for maintenance based 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

- 24,000 A - 160 kA - 50 Hz
- 23,350 A - 160 kA - 60 Hz

Key Benefits

- Utmost reliability of the full spring mechanism
- CBWatch makes proactive maintenance possible
- Interrupting chambers with enhanced smart air cooling system
- Digital communication / Easy integration into digital power plants (with IEC 61850 and Modbus TCP)
- Ideal for large & very large 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

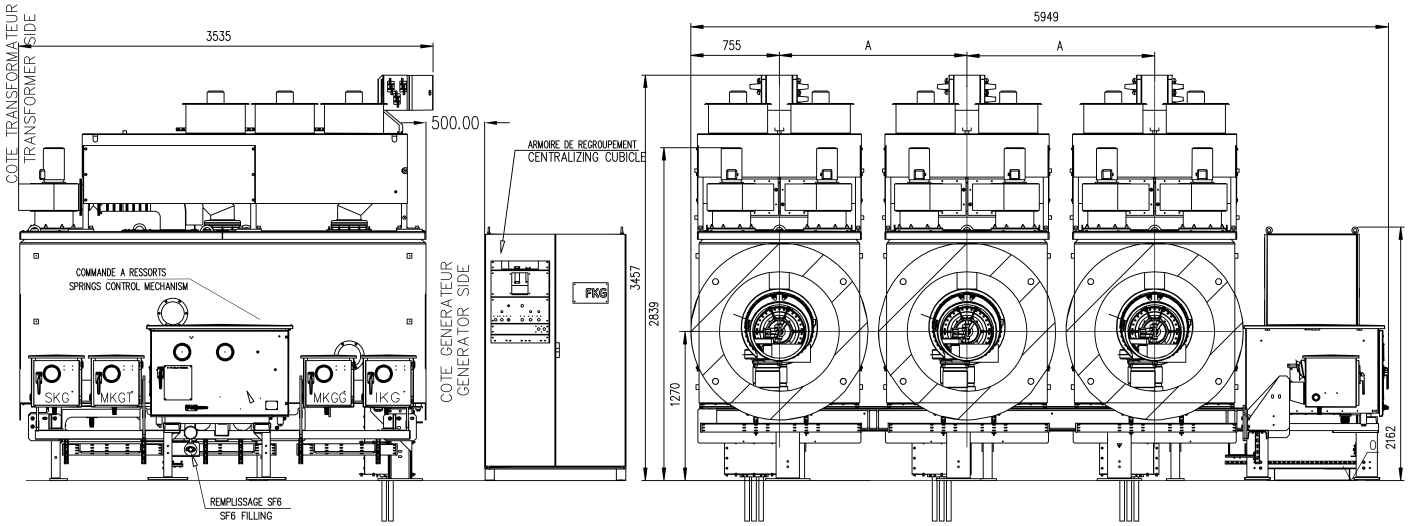
**Depending upon the power station's specifications, GE Vernova may propose an alternative GCB power rating.*

GE VERNOVA

Technical Specifications

		FKGLXV			
Rated maximum voltage	kV	32.4			
Short-circuit breaking current	kA	up to 160			
Rated out-of-phase breaking current	kA	80			
Rated breaking time	ms	75			
Rated closing time	ms	100			
Insulating gas		SF_6			
Rated absolute pressure at 20°c	kPa	950			
Minimum absolute pressure at 20°c	kPa	800			
Location		Indoor/ Outdoor (protected)			
Breaker cooling type		Enhanced with 2 fans with redundancy			
Ambient air temperature limits	°C	-20°C(-25°C)/+40°C			
Busbar temperature limit/Enclosure temperature limit	°C	90/70°C		105/80°C	
Frequency	Hz	50	60	50	60
Maximum rated normal current Indoor with ambient air 40°C	A	24,000	23,350	22,900	22,250
Phase spacing A with 100 mm step	mm	1,600 to 2,000			
Protection degrees (enclosure/cubicles)		IP65/IP55			
SF_6 monitoring by densimeter		3-phase			
Pressure reading		Yes			
		FKG1X Circuit Breaker	**SKG1X Disconnector**	**MKG1X Earthing Switch**	**IKG1 Starting Switch**
Rated peak withstand current	kApeak	440	440	440	330
Rated short time withstand current	kA	160	160	160	100
Rated duration of short-circuit	s	3	3	2	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	 80 150	 80 150		 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	 80 150	 90 165	 80 150	 80 150

Dimensions



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

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