Grid Solutions

GL 314 / GL 314X

Live Tank Circuit Breakers for 245 / 300 kV

GE Vernova's live tank circuit breakers for outdoor installations feature third-generation self-blast interrupter chambers and spring-operated mechanisms (FK). The field-proven interrupter chamber operates on the basis of the energy-optimised self-blast principle. The FK3 type mechanisms equip the entire range of circuit breakers with more than 250,000 references worldwide.

High Quality Components

- Single pole or three pole operating design
- Self-blast interrupter chambers
- Spring mechanism FK3 equipped with a position indicator visible from outside
- Field-proven temperature-compensated density monitor with two-stage transducer and three-color dial
- Easy access to the SF_6 filling connection (type DILO)
- Sealings suitable for temperatures down to -60 °C
- Hot-dip galvanized steel parts and mechanism housing made completely of aluminum

Options for Customization

- Standard low voltage equipment provided, additional equipment is available
- Composite insulators are available
- Seismic dampers for high seismic request can be provided
- Pressure relief system for passive protection of both substation and personnel
- RPH3 controller: Point-on-wave tripping and closing relays
- CBWatch: compact and modular circuit breaker monitoring solution

Enhanced Installation and Maintenance

- Preset at factory prior shipping - no adjustments during installation or commissioning
- Pole units pre-filled with SF_6 at factory before shipping
- Disassembly of interrupter chamber without removal of entire pole column possible

Rigorous Testing

GE Vernova's live tank circuit breakers meet the requirements of national and international standards. This has been confirmed by comprehensive type tests based on the latest versions of IEC standards.

GE VERNOVA

Reliable Performance

Live tank SF_6 circuit breakers use self-blast technology and benefit from latest technological developments as well as our field-proven, time-tested experience in high voltage switchgear in accordance with the IEC 62271-100 standard.

Superior Manufacturing

GE Vernova's entire development and production procedures for our live tank circuit breakers are fully compliant with the latest ISO 9001, ISO 14001 and OHSAS 18001 quality standards. This ensures the high quality of our products and services and is confirmed by regular audits.

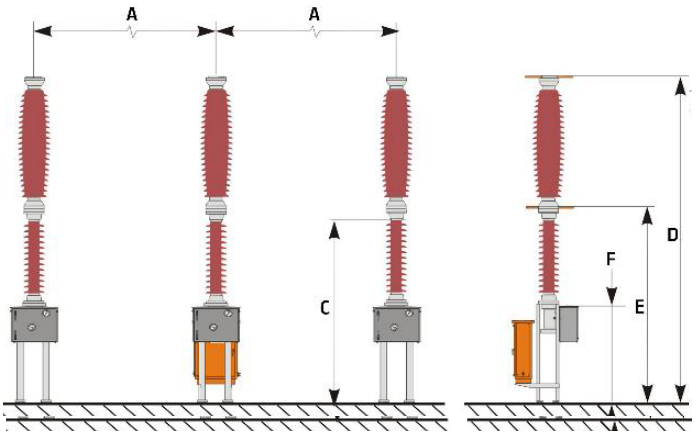
Key Benefits

- High mechanical endurance and very low restrike probability according to IEC 62271-100 class M2 & C2
- Quick and easy installation and commissioning
- Long maintenance intervals
- Proven reliability even under the most severe conditions

Dimensions (in mm)

	A	C	D	E	F
GL 314	3,000	4,370	6,797	4,490	2,209
GL 314X - 245 kV	3,000	4,370	6,797	4,490	2,209
GL 314X - 300 kV	4,000	4,976	7,690	5,110	2,209

** Indicative values only. Final dimensions depend on configuration.*



Ratings

BREAKER TYPE		GL 314		GL 314X	
Number of breaks / phase		1		1	
Rated normal voltage	kV	245 / 252		245	300
Rated normal current	A	4,400		4,000	
Rated frequency	Hz	50	60	50	50
Rated dielectric withstand (up to 1,000 m)* (to earth / across open device) - At power frequency - At lightning impulse (1.2 / 50 µs wave) - At switching impulse	 kV kV (peak) kV (peak)	 460 / 530 1,050 / 1,200 N/A		 460 / 530 1,050 / 1,200 N/A	 460 / 530 1,050 / 1,050 (+170) 850 / 700 (+245)
Rated short-circut breaking capacity -Periodic component (r.m.s value)	kA	50	40	63	50
First pole-to-clear factor		1.3	1.5	1.3	1,3
Peak short-circut withstand current	kA (peak)	137	110	173	137
Rated line-changing capacitive switching		Class C2		Class C2	
Mechanical endurance		Class M2		Class M2	
Breaking time	cycles	2 - 2,3		2 - 2,3	

**For other values, please contact GE Vernova.*

Gas Data*

The functioning of this equipment relies upon SF_6, a fluorinated greenhouse gas.

	SF_6
Average mass of gas/mixture in the equipment (kg)*	17.8
GWP_{100} of gas/mixture (CO_2-equivalent)	24,300
CO_2-eq of gas/mixture in the equipment ($t_{co2\text{-}eq}$) *	432.5

**For information purposes only. It varies depending on the equipment considered.*

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

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English
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