Grid Solutions

GL 318 / GL 318XD

Live Tank Circuit Breakers for 800 kV

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 operating design
- Four self-blast interrupter chambers per pole
- 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 (DILO type)
- Sealings suitable for temperatures down to -60°C / -76°F
- 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
- CSD100: Point-on-wave tripping and closing relays (IPO)
- Compact and modular circuit breaker monitoring solution
- Closing resistors solution to limit high and damaging overvoltages
- Grading capacitors depending on specifications

Enhanced Installation and Maintenance

- Preset at factory prior shipping - no adjustments during installation or commissioning
- 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

High 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

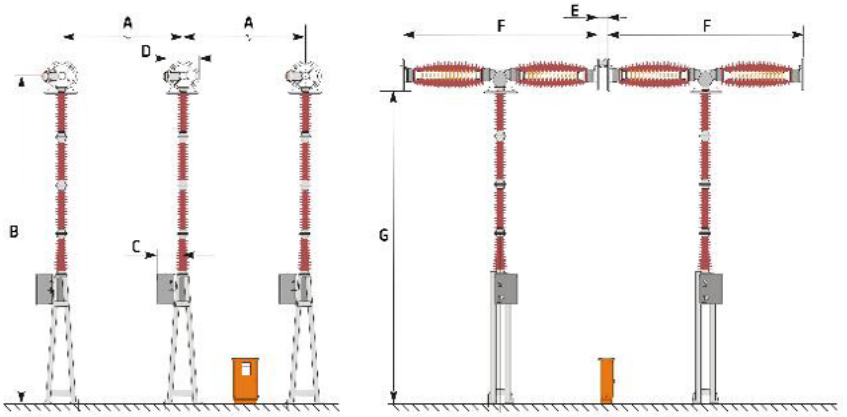
GE Vernova's entire development and production procedures for live tank circuit breakers are fully compliant with the latest ISO 9001, ISO 14001 and OHSAS 18001 quality standards. This ensures the high quality of our products and services and is confirmed by regular audits.

Key Benefits

- High mechanical endurance and very low restrike probability according to IEC 62271-100 class M2 & C2
- Disconnecting option for easy and fast installation
- Closing resistor located in the same gas volume as breaking chamber

Dimensions (in mm / inches)

	A	B	C	D	E	F	G
GL 318 / GL318X	10,000 / 393.7	9,333 / 367.4	931 / 36.6	1,100 / 43.4	328 / 12.9	5,299 / 208.6	8,783 / 345.8
GL318D / GL318XD*	10,000 / 393.7	9,333 / 367.4	931 / 36.6	1,100 / 43.4	328 / 12.9	6,841 / 269.3	8,783 / 345.8



Ratings

BREAKER TYPE		GL 318/GL 318D	GL 318X/GL 318XD
Number of interrupters/phase		4	4
Rated normal voltage	kV	800	800
Rated normal current*	A	4,000	5,500
Rated frequency	Hz	50/60	50
Rated dielectric withstand* (up to 1,000m / 3,281 ft) (to earth/accross open device) - At power frequence - At lightning impulse (1.2/50 µs wave) - At switching impulse	 kV kV(peak) kV(peak)	 830/1,150 2,100/2,100(+455) 1,500/1,175(+650)	 830/1,150 2,100/2,100(+455) 1,550/1,175(+650)
Rated short-circuit breaking capacity - Periodic component (r.m.s value)	kA	50	63
First pole-to-clear factor		1.3	1.3
Peak short-circuit withstand current Rated closing, latching and short time carrying current	kA(peak)	137	173
Transformer Limited Fault (TLF)	kA	5 - 15	6 - 19
Rated line-charging capacitive switching		Class C2	Class C2
Mechanical endurance		Class M2	Class M2
Breaking time		40 – 46 ms 2 - 2,3 cycles @ 50 Hz 2,4 – 2,7 cycles 60 Hz	

**For other values, please contact Grid Solution.*

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/lbs)*	93.6 / 206.4
GWP_{100} of gas/mixture (CO_2-equivalent)	24,300
CO_2-eq of gas/mixture in the equipment ($t_{CO_2\text{-eq}}$ / short $tons_{CO_2\text{-eq}}$)*	2,274.5 / 2,507.2

**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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