Grid Solutions

GL 313

Live Tank Circuit Breakers for 170 kV

Down to -40 °C with pure SF_6

GE Vernova's live tank circuit breakers for outdoor installation are designed for temperatures down to -40°C and feature the latest technologies in interrupter chambers and spring-operated mechanisms. For example, the latest double-motion technology effectively reduces the opening energy by approximately 65%.

Components

- Interrupter chamber with integral double-motion technology and self-blast system
- Pressure relief system for passive protection of substation and personnel
- Field-proven, temperature-compensated density monitor with two-stage transducer and three-color dial
- Easy access to the SF_6 filling connection (type DILO)
- SF_6 non-return (check) valve on each pole column
- Protected opening springs inside each pole column
- Hot-dip galvanized steel parts
- Mechanism housing made completely of aluminum
- Reliable spring-operated mechanism with position indicator clearly visible from outside

Installation and Maintenance

- Preset at factory before shipping - no adjustments necessary during installation and commissioning
- Pole units pre-filled with SF_6 at factory before shipping
- Independent disassembly of the interrupter chamber without having to remove the entire pole column

Testing

GE Vernova's live tank circuit breakers meet national and international requirement standards. This has been confirmed by comprehensive type tests according to the latest IEC and ANSI standards.

High Performance

Live tank circuit breakers ensure a high level of reliability every day. Even under extreme conditions and climates or in highly active seismic areas, customers can count on live tank circuit breakers made by GE Vernova's Grid Solutions business.

Key Benefits

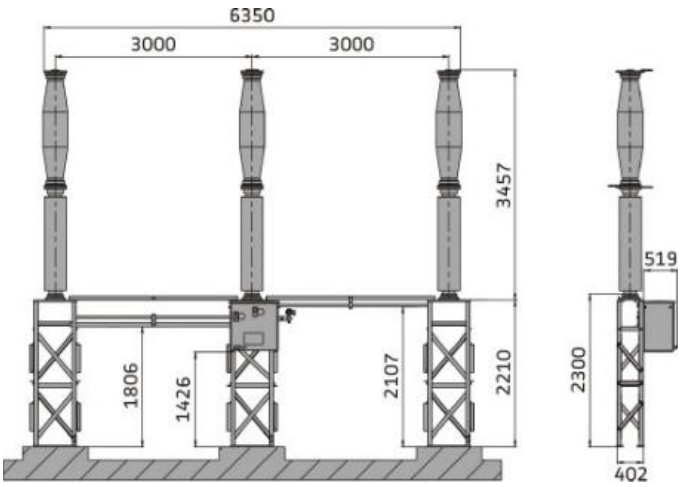
- Temperatures down to -40°C with pure SF_6
- Quick and easy installation and commissioning
- Long maintenance intervals

Quality

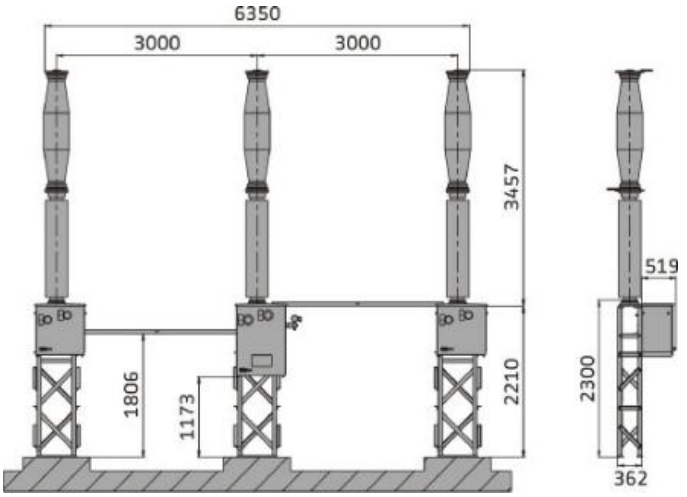
The entire development and production procedures are fully compliant with the latest ISO 9001, ISO 14001 and OHSAS 18001 quality standards. This ensures the high quality of our products and services and is confirmed by regular audits.

GE VERNOVA

Dimensions



GL 313 F1/4031 P



GL 313 F3/4031 P

Ratings

BREAKER TYPE	GL 313 F1/4031 P AND GL 313 F3/4031 P
Rated voltage	170 kV
Rated frequency	50/60 Hz
Rated normal current	up to 3,150 A
Rated short-circuit break current	up to 40 kA
Rated short-circuit making current	104 kA
Rated duration of short-circuit	3 s
Opening time	28 ms
Break time	50 ms
Closing time	≤70 ms
Average ambient temperature*	-30 °C up to +40 °C
Design altitude*	1,000 m.a.s.l.

** Standard value according to IEC. Temperatures down to -40 °C up to +70 °C and / or higher design altitudes are available upon request.*

Technical Characteristics

- **Spring-operated mechanism/degree of protection:**
  FK 3/IP 55
- **Rated operating sequence:**
  O-0.3s-CO-3min-CO resp. CO-15s-CO
- **Rated supply voltage:**
  from 24 V up to 250 V dc/ac

Product Options

- Composite insulators
- More phase centre distances available on request
- CB Watch 3 monitoring system
- RPH3 controller (F3)

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)*	12.7
GWP_{100} of gas/mixture ($C0_2$-equivalent)	24,300
$C0_2$-eq of gas/mixture in the equipment ($t_{co2\text{-}eq}$)*	309.1

**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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