Grid Solutions

GL 309/310 WO

72.5 / 100 kV Withdrawable Outdoor Circuit Breaker

Replacing old switchgear quickly and efficiently with new equipment helps our customers to reduce installation costs. A high priority during the development of the GL 309/310 wo withdrawable circuit breaker was them compatibility with older equipment such as GE Vernova Grid's HPGE and FXT circuit breakers.

Operation and Design - Safe and Reliable

The GL 309/310 wo withdrawable circuit breaker is track-mounted and manually activated so that the disconnector contacts can be closed or opened. The isolating distance status is visible at all times. A catch zone ensures safe disconnection contact insertion during truck movement. A truck travel limiting feature automatically resets to ensure that the specified travel distance will never be extended. Instrument transformers can optionally be mounted on the mobile circuit breaker part. An interlocking device (optional) ensures that circuit breaker movement is only possible when in the open position.

The GL 309/310 wo withdrawable circuit breaker is compatible with prior products such as HPGE and FXT circuit breakers.

The circuit breaker incorporates standard GL 300 series pole columns and is operated by the well-known and field-proven FK3 spring-operated mechanism.

- Energy for the closing operation is stored in the spring-operated mechanism
- Energy for the opening operation is provided by the protected spring inside the pole columns
- Field-tested manual mechanism handles the disconnecting function
- Circuit breaker moves easily on tracks

Testing

Live tank circuit breakers meet the requirements of national and international standards. This has been confirmed by comprehensive type tests according to the latest IEC and ANSI standards.

Proven quality

Our quality (ISO 9001:2000), environmental (ISO 14001) and occupational health and safety (OHSAS 18001) management systems determine the development and production procedures for our high voltage circuit breakers. These systems ensure the high quality standards of our products and services, which are confirmed by regular audits.

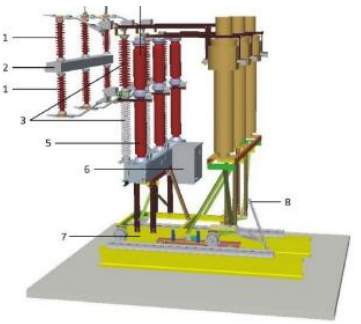
Customer Benefits

- Space saving, compact design
- integrating various functions:
  - Circuit breaker
  - Disconnector
  - Instrument transformer (optional)
- Rapid replacement through compatibility with prior products HPGE and FXT

GE VERNOVA

Product Description

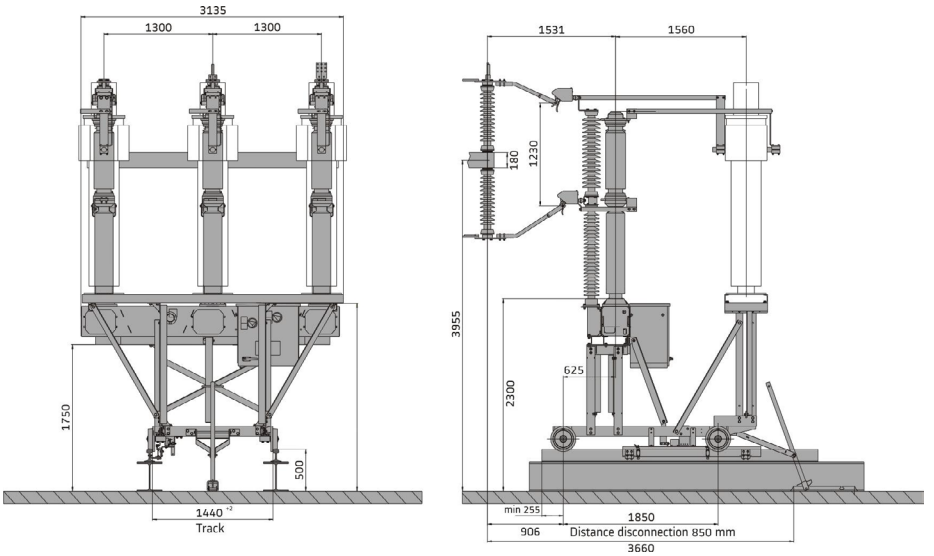
1. Fixed insulator
2. Traverse (fixed)
3. Preinsulator
4. Interrupter chamber
5. Support insulator (CB)
6. Spring-operated mechanism
7. Truck
8. Lever



Technical Characteristics

- **Installation location:**
  Outdoor (and indoor)
- **Spring-operated mechanism:**
  FK3-1
- **Rated operating sequence:**
  O-0.3s-CO-3 min-CO resp. CO-15s-CO
- **Rated supply voltage:**
  24 up to 250 V dc/ac
- **Ambient temperature:**
  -30°C up to +40°C

Further data is available on request.



GL 309 F1/3116 wo

Product Options

- **Prearrangement for instrument transformer integration**
- **Instrument transformers**
- **CBWatch-2 monitoring system:**
  Add-on monitoring (automatic diagnosis) for conventional control of the switchgear
- **Interlocking device**
- **Different track widths**
- **SynCR3 (F3):**
  Point-on-wave closing relays for capacitor bank switching
- **Operation: single pole (F3)**
- **Traverse (fixed)**
- **RPH2 controller (F3):**
  Point-on-wave tripping and closing relays for all point-on-wave switching tasks

Ratings

BREAKER TYPE		GL309 F1/3116 WO	GL310 F1/3116 WO
Rated voltage	kV	72.5	100
Rated frequency	Hz	50	
Rated power frequency withstand voltage - circuit breaker - disconnector	kV	 140 160	 185 210
Rated lightning impulse withstand voltage - circuit breaker - disconnector	kV	 325 375	 450 520
Rated normal current	A	up to 1600	
Rated short-circuit breaking current	kA	31.5	
Rated short-circuit making current	kA	79	
Rated duration of short-circuit	s	3	
Opening time	ms	40	28
Break time	ms	60	50
Closing time	ms	≤70	

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

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English
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