

1100kV 6300A Gas Insulated Substation GIS

The 1100kV 6300A Gas Insulated Substation (GIS) is designed for controlling, measuring, protecting, and transforming electric transmission lines. It consists of a circuit breaker, current transformer, disconnector, earthing switch, main busbar, incoming and outgoing line bushing and local control cabinet.



Overview

High-Voltage Gas Insulated Substation

The 1100kV GIS is a high-performance electrical substation enclosed in a sealed environment with insulating gas for reliable power transmission. Designed for demanding applications, the system integrates circuit breakers, disconnectors, and busbars into space-saving, gas-tight modules. This configuration enhances operational safety and grid stability while providing protection against environmental factors in space-constrained installations.

Key Performance Metrics

Performance Highlights

1100 kV

Rated Voltage

6300 A

Rated Current

50 kA

Short-time Withstand Current

Technical Specifications

Electrical Parameters Table

Parameter	Value
Rated Frequency	50/60 Hz
Rated Peak Withstand Current	135 kA
Rated SF6 Annual Leakage	d0.5%

Insulation Levels

Dielectric Strength

- Power Frequency Withstand (To Earth/Between Poles): 1100 kV
- Power Frequency Withstand (Across Isolating Distance): 1100(+635) kV
- Lightning Impulse Withstand (To Earth/Between Poles): 2400 kV
- Lightning Impulse Withstand (Across Isolating Distance): 2400(+900) kV

Operating Environment

Rated SF6 Gas Pressure (20°C)

- CB Compartment: 0.65 MPa
- Others: 0.45 MPa

Features

Core Capabilities

1100kV Voltage Level, 8000A Busbar Capacity, 50kA Breaking Capacity, Space-Efficient Design