

TENLEE ELECTRIC GROUP

Power for a better world
TENLEE ELECTRIC GROUP



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Reliable innovation. Reliable guarantee.

GSC LBS

Gas-insulated indoor
switch disconnecter for
secondary distribution.
Range from 12 kV to 24 kV
and 630 A.

GSC LBS



Description General



The GSC is a 12~24 kV medium voltage load break switch is designed for indoor or outdoor medium voltage switchgear panels.

The GSC epoxy resin enclosure can provide good insulation and resistance to moisture and environmental pollution.

The insulating housing is composed of upper shell and lower shell. It is tightly closed and filled with SF₆ gas as insulation and arc quenching medium.

Safety

The epoxy resin enclosure is anti-corrosion, low leakage rate

with viewing window

with pressure release channel

optional gas pressure meter

Economy

high cost performance

low maintenance cost, 5000 times mechanical life

long service life, working for at least 30 years

Compactness and convenience

simplified design

small volume, reduced dimensions and weights

simple to incorporate

convenient installation and operation

Reliability

mature technology

wide application

A three position switch to prevent incorrect operating

The SF₆ gas



SF₆ GAS

a non-inflammable gas

SF₆ is an inert gas and does not sustain combustion. The seal and the for-life lubrication of the rotary seals is provided by an oil film. In the MV circuit breaker field, for example, on more than 20 000 SF₆ switchgear units installed by the French electrical utility (EDF), the annual fault rate related to seal problems is less than 0.05 %.

A very stable gas

The high stability of SF₆ gas is due to the 6 covalent bonds of its molecule.

an insulating gas

The dielectric strength of SF₆ is superior to that of most known media, reaching 5 times that of air at a pressure of a few tenths of Mpa.

A breaking gas

SF₆ is "the" breaking gas offering a number of advantages: 1. high capacity for carrying the heat produced by the arc. The arc is rapidly cooled by convection during arcing; 2. high radial thermal conduction and high electron capturing capacity; when the current passes through zero: the SF₆ permits rapid heat exchange from the centre of the arc towards the exterior, the fluorine atoms, which are highly electro-negative, act as veritable "traps" for electrons; since it is the electrons which are mainly responsible for electric conduction in the gas, the gap between the contacts recovers its initial dielectric strength through this electron capture phenomenon at current zero.

very low maintenance

The electrical contacts, housed in a sealed-for-life enclosure, require no special maintenance. The operating mechanism requires only minimum maintenance at intervals depending on the conditions of use. Under normal operating conditions, no preventive maintenance is required before 10 000 operations or 10 years of service.

Technical data

| Item | Unit | Rating | |
|--|-------|--------|-------|
| Rated voltage | KV | 12 | 24 |
| Rated frequency | Hz | 50/60 | |
| Rated current | A | 630 | |
| Rated load breaking current | A | 630 | |
| Rated cable charging breaking current | A | 10 | |
| Rated short circuit making current | KA | 50 | |
| Peak withstand current | KA | 50 | |
| Rated short circuit withstand current | KA | 20 | |
| Rated short circuit duration | S | 3 | |
| Power frequency withstand voltage,phase to phase/phase to ground (effective value) | KV | 42 | 50 |
| Power frequency withstand voltage,interrupting gap (effective value) | KV | 48 | 60 |
| Lightning impulse withstand voltage,phase to phase/phase to ground | KV | 75 | 125 |
| Lightning impulse withstand voltage,interrupting gap | KV | 85 | 145 |
| Mechanical life | Times | ≥5000 | ≥2000 |
| Protection degree | | IP3X | |

* 36KV is available upon request

service conditions:

| | |
|--|--|
| Altitude | ≤2000 meters |
| Surrounding temperature | -10 ~+45 Celsius |
| Relative humidity | Average daily should not be more than 95% Average monthly should not be more than 90% |
| No obvious dust, smoke, corrosive or flammable gas, vapour or salt pollution | |
| No frequent strenuous vibration | |
| Pls contact us if you have a different request | |