

H.V. Disconnecter

420kV Outdoor, knee type, single pole, AC disconnecter with electric motor operating mechanism

Description

The disconnecter is single-pole, knee type with a two piece folding blade and two cylindrical post insulators installed on a common hot dip galvanized steel base, one rotating insulator and integrated earthing switch. The two cylindrical post insulators are equipped with corona rings in order to level off the electric field. The rotating insulator rotates in order to transmit the motion to the blade securely. The operating mechanism of the disconnecter is driven by an electric motor via metallic gearwheels and can be operated locally and remotely. There is also a manual emergency operation that is carried out via rotary motion and reduction gears using a hand-handle. The operating mechanism is equipped with auxiliary switches. The extra heavy aluminum arm consists of two pieces and in the open position folds upon itself in a vertical position. Counterbalancing springs are used to balance the weight of the movable parts. All the contacts used are made of silver plated copper, are replaceable and self cleaning and are designed so that short circuit currents increase their contact pressure. When in the closed position they are able to withstand seismic and wind forces, forces exerted by the tension of the wires and due to temperature variations. A flexible tin plated copper strip is used to earth the disconnecter to the substation earthing. The earthing switch is single pole and linked directly to the disconnecter and can be electrically or, in case of emergency, manually operated. The disconnecter, when installed, is mounted on a steel structure as shown in the attached schematics. STALCO SA has been producing this type of disconnecter for many years. Throughout all this time they have operated optimally and without problems in the field. The product has been type tested according to the relevant EC standards (EC 62271-102 & EC 60694). The production facilities include a state of the art testing laboratory in which the required routine tests are conducted to each disconnecter. The design and integrated equipment of the disconnecter can be adapted according to our clients' requirements. SERVICE CONDITIONS

Installation: Outdoors

Ambient air temperature: max +45°C, min -24°C

Altitude: Up to 1000m above sea level

Relative humidity: <95%

Ice coating: max 20mm

Pollution level: moderated to heavy

Wind speed: 150km/h

Other conditions: Snow and fog ELECTRICAL CHARACTERISTICS

Rated voltage: 420kV

Rated frequency: 50Hz

Rated nominal current: 3150A

Rated short time withstand current: 40kA rms

Rated peak withstand current: 100kVrms

Rated short circuit duration: 3sec

Rated power frequency voltage withstand levels: 620kV (phase to earth)/800kV(isolating dist)

Rated switching impulse voltage withstand levels: 900 (+450) kV (isol. dist), peak (dry) /1050kV peak (phase to earth)

Lightning impulse withstand voltage: 1550kV peak (phase to earth)/1550 (+315) kV peak (isol. dist.)

Mechanical endurance class: M1 (2000 operating cycles) [Click here for product brochure](#) Â Â Â Â