

Principle of intelligent compensation capacitor

What is intelligent capacitor?

Intelligent capacitor is mainly composed of intelligent control unit, zero-crossing switching switch device, low voltage power capacitor, and the internal temperature of the capacitor and acquisition of the current signal, etc., divides into total compensation and separate compensation, specific principle diagram is as follows.
Parameters

What is a compensation capacitor?

The compensation capacitor reduces the total impedance of the series circuitry consisting of the Helmholtz coils HHS 5210-100 and the NFCN 9732-120 at the operating frequencies of 50 to 60 Hz. It allows continuous currents of up to 8 A rms at generator voltages of less than 70 Vrms...80 Vrms.

How a capacitor compensation circuit is controlled?

Through the logic drive circuit, pulse width modulation circuit, zero point detection circuit and power factor detection circuit, the on-off of the self-turning off device in the switch circuit was controlled to control the charging and discharging voltage of the compensation capacitor, and then the capacitor compensation current was controlled.

What is series capacitive compensation method?

Abstract: Series capacitive compensation method is very well known and it has been widely applied on transmission grids; the basic principle is capacitive compensation of portion of the inductive reactance of the electrical transmission, which will result in increased power transfer capability of the compensated transmissible line.

What is a power factor automatic compensation control device?

The power factor automatic compensation control device of the self-turning off device manufactured by this method has the characteristics of simple structure, small volume and high efficiency, and can automatically carry out random power factor compensation for the electric load on site.

What are thyristor-controlled series capacitors (tcscs)?

Thyristor-controlled series capacitors (TCSCs) introduces a number of important benefits in the application of series compensations such as, elimination of sub-synchronous resonance (SSR) risk, damping of active power oscillations, post-contingency stability improvement, and dynamic power flow control.

Conventional intelligent capacitor OVE800C is a new generation of intelligent power reactive compensation device applied to 0.4KV low voltage power grid, which is based on two groups (Δ type) or a group (Y type) low voltage power capacitor as the

Principle of intelligent compensation capacitor

400V 50Hz
2017???

To explain the operating principle of the SSSC, this chapter compares it to the classical series capacitor compensation with the use of phasor diagram. As a result of the series capacitive compensation, a decrease in the equivalent line impedance is achieved and, consequently, a corresponding increase in the electric power transmitted on the line.

This paper is for the problems of the 400V low voltage power capacitor reactive power compensation and for the problems existing in the transient process, resuming the principle of low-voltage capacitor intelligent technology and its implementation briefly. Propose a synchronization of reactive compensation capacitor switching on-off control system based on ...

This paper is for the problems of the 400V low voltage power capacitor reactive power compensation and for the problems existing in the transient process, resuming the principle of low-voltage capacitor intelligent technology and its implementation briefly.

In isolated hybrid electrical system, reactive power compensation plays a key role in controlling the system voltage. The reactive power support, essential to maintain the voltage profile and stability of the system, is one of the six ancillary services specified in the FERC order no. 888 [].Reference [] explains two types requirement of reactive power for system operation; ...

In this study, a substation with a 110-10 kV voltage conversion level is taken as an example. The substation intends to change two main transformers with small capacity into two main transformers with large capacity, expand the original load routes and compensation capacitors, and realize the intelligent operation of the equipment. In this ...

Different compensation topologies have been proposed to improve the comprehensive performance. The simplest topology is a single inductor connected in series with the coupling capacitor to form a resonant circuit [26].

Conventional intelligent capacitor OVE800C is a new generation of intelligent power reactive compensation device applied to 0.4KV low voltage power grid, which is based on two groups (...

400V 50Hz
???

Series capacitive compensation method is very well known and it has been widely applied on transmission grids; the basic principle is capacitive compensation of portion of the inductive ...

Principle of intelligent compensation capacitor

Different compensation topologies have been proposed to improve the comprehensive performance. The simplest topology is a single inductor connected in series ...

Capacitor Prashanth Kumar Manda, Logesh Karunakaran, Sandeep Thirumala, Anjan Chakravorty, Member, IEEE, and Soumya Dutta, Member, IEEE, Abstract--In this paper, we demonstrate the principle of operation of a metal-insulator-semiconductor (MIS) capacitor based on undoped organic semiconductor. In spite of low charge concentration within the ...

To explain the operating principle of the SSSC, this chapter compares it to the classical series capacitor compensation with the use of phasor diagram. As a result of the series capacitive ...

Abstract: An automatic compensation method was presented bases on adaptive capacitance regulation technology and the principle of controlling capacitor charging and discharging ...

Series compensation can provide increased transmission capacity, improved voltage profile of the grid, enhanced angular stability of power corridor, damping of power ...

Web: <https://degotec.fr>