Capacitor single-phase grounding

Is a single-phase grounding fault voltage full compensation topology based on antiphase transformer?
In this paper,a novel single-phase grounding fault voltage full compensation topology based on antiphase transformer is proposed,which is composed by an antiphase transformer,a phase-selection switch and a multi-tap single-phase voltage regulator.

What is a single phase grounding fault?
At 0.12 s, the single-phase grounding fault occurs, the fault point is 10 km from the bus, the transition resistance is set to 100 ?, the initial compensation current is injected at 0.18 s, and the control neutral point voltage of the active inverter is adjusted as the reference value at 0.24 s.

What is full compensation for single-phase grounding fault based on arc suppression method?
This is the basic principle of full compensation for single-phase grounding fault based on voltage arc suppression method. A novel voltage full compensation topology of single-phase grounding fault based on antiphase transformer is shown in Figure 2, which can be used to control the neutral point voltage.

What happens if a single-phase grounding fault is not suppressed?
If the single-phase grounding fault is not suppressed in time,it is easy to cause arc grounding,and even cause phase-to-phase grounding short-circuit fault,which will seriously threaten the safety of personal safety and reliable operation of the power grid.

Does a single-phase grounding fault occur on phase a of L4?
Suppose the single-phase grounding fault occurs on phase A of L4. In order to verify the accuracy of the fault distance estimation method proposed in this paper, the simulation was carried out under different fault conditions. The results of the fault distance calculation are shown in Table 3.

What is the residual voltage and residual current after a grounding fault?
After the grounding fault occurs,the ASC immediately compensated the fault current,and the RMS values of residual voltage and residual current is 89.66 Vand 0.897 A,respectively. After the proposed topology is connected,the RMS values of residual voltage and residual current drop to 9.5 V and 0.095 A,respectively.

The instability of single-phase grounding faults makes it difficult to track the fault development process accurately. In this paper, a transition conductance tracking method for single-phase grounding fault identification is ...

AbstractMulti-tap and multi-capacitors type arc suppression coils are commonly used in distribution systems. Due to their low compensation accuracy and limited arc ...

A single phase induction motor needs a capacitor in its circuit at the starting time to produce the starting

torque. Without a capacitor, a single-phase capacitor start induction motor can not run. The other single-phase induction motors, such as ...

In this paper, a novel single-phase grounding fault voltage full compensation topology based on antiphase transformer is proposed, which is composed by an antiphase transformer, a phase-selection switch and a multi ...

A single-phase active inverter is used to inject a controllable current (dot{I}_{{text{i}}}) into the neutral point for arc suppression, U DC is the voltage at the dc ...

The key problem is measuring the phase-to-ground capacitance accurately online. Displacement voltage is a method of measuring the phase-to-ground capacitance ...

Abstract: Aiming at the single-phase grounding fault location problem of neutral point ungrounded distribution network system with distributed generators, a single-ended impedance method ...

If a generator is single-phase grounded at the terminals with grounding device but without load, single-phase grounding current can be obtained. As shown in Table 4, the single-phase-to-ground fault currents are ...

The TAS can suppress the voltage at the fault point by directly grounding the fault phase at the bus after the fault. However, this method is greatly affected by the load, ...

The instability of single-phase grounding faults makes it difficult to track the fault development process accurately. In this paper, a transition conductance tracking method for ...

In this study, a single-phase-to-ground fault protection method for low-resistance grounding systems was proposed based on the zero-sequence current ratio coefficient. After ...

In this paper, a novel single-phase grounding fault voltage full compensation topology based on antiphase transformer is proposed, which is composed by an antiphase ...

The fault of medium and low voltage distribution network is mostly single-phase grounding fault. This kind of system is often run by neutral ungrounded system. When the capacitance current ...

1. In the fault line, phase A to ground voltage drops to 0, so the capacitance current is 0. The other two phase to ground voltage rises to (sqrt 3) times, and the ...

single-phase voltage regulator (MSVR) is used to compensate the output voltage error of the antiphase transformer. In this paper, the basic principle of this novel full volt-age compensation ...

The paper presents a five-level common ground type (5L-CGT) transformer-less inverter topology with double

voltage boosting. The proposed inverter uses eight switches and ...

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