



GROUNDING



Components of Grounding



- Earth Continuity conductor
- Earthing Lead
- Earth electrode



TYPES OF GROUNDING



- Ungrounded or Capacitance Grounding
- Solidly Grounded
- High resistance grounding



Ungrounded or Capacitance Grounding



Electrically the system is connected to ground through the capacitance between the lines and the earth, so you can say that it's a capacitance grounded system.

ADVANTAGES

Offers a low value of current flow for line-to-line ground fault (5A or less)

Presents no flash hazard to personnel for accidental line-to-ground fault

Assures continued operation of processes on the first occurrence of a line-to-ground fault

Low probability of line-to-ground arcing fault escalating to phase-to-phase or 3-phase fault



Solidly grounded System



This type of grounding system is most commonly used in industrial and commercial power systems.

Here grounding conductors are connected to earth ground with no intentional added impedance in the circuit.

A main secondary circuit breaker is a vital component required in this system.

This component is large in size because it has to carry the full load current of the transformer.



High Resistance Grounding



High-resistance grounding systems are commonly used in plants and mills where continued operation of processes is necessary in the event of a fault.

High resistance grounding is normally accomplished by connecting the high side of a single phase distribution transformer between the system neutral and ground and connecting a resistor across the low voltage secondary to provide the desired lower value of high side ground current.