

NEUTRAL GROUNDING RESISTOR(NGR)

Neutral grounding resistors(NGR) are used to ground the star (neutral) point of transformers or generators in industrial power systems. A neutral grounding resistor limits the fault current to a value which is sufficient enough to operate protective relays and prevent unwanted fault damages.

When the neutral of a system is not grounded, destructive overvoltages appear from line to ground during normal switching of circuits. These overvoltages cause aging and insulation failure at various locations throughout the system.

The advantages of using NGR are:

- Protecting transformers or generators from a damage caused by a ground fault by limiting the fault current to a safe value;
- Detecting the fault by a current transformer inside the neutral grounding resistor;
- Reducing the short-term overvoltages
- Increasing safety for personnel
- Improving reliability of power system
- Increasing lightning protection
- Reducing operation/maintenance expenses

Electrical Technical Specifications

Operating voltage: < 110 kV (line to line)

Rated current: < 5000 A

Resistance alloy: stainless steel (AISI304, AISI316, AISI430, AISI310)

Standard: IEEE Std 32

Resistor Element Features

- Grid or edgewound type
- Fully modular and bend grid connections made using bolts and nuts
- All metal hardware made of stainless steel
- Wide steatite bushings and thick threaded rods prevent the resistive blocks from sagging

Enclosure Features

- Protection degree: IP23 standard
- Made of hot-dip galvanized steel sheet
- Completely modular, rigid cabin design - can be lifted from the top and the bottom
- Double hinged door with a lock
- All metal connectors, including lifting eyebolts, made of stainless steel
- Rustproof metal nameplates and warning labels

Options Available

Protection degree	: IP54 or IP55
Enclosure	: Hot-dip galvanized, stainless steel, painted
Cable Entrance	: Bottom with a cable / Top with a bushing / Side with a bushing
Optional elements	: Disconnecter switches, voltage transformers, surge arrestors, panel heaters