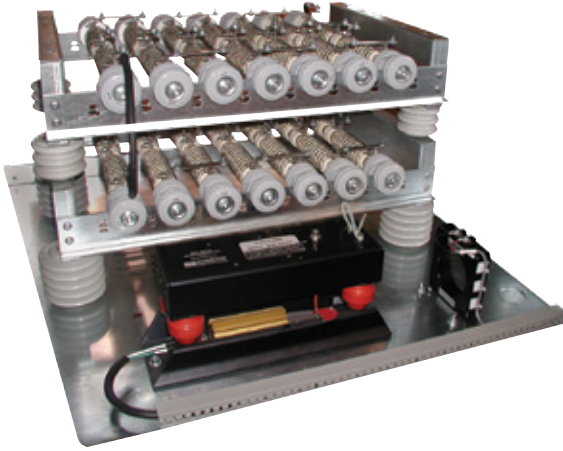


# NGR SERIES

## Neutral-Grounding-Resistor System



### Description

Neutral-Grounding Resistors (NGRs) are used to ground power systems by inserting a resistor between the system neutral and ground. This lowers the prospective ground-fault current to a predetermined value.

A properly designed resistance-grounded system provides benefits over both ungrounded and solidly grounded systems. Because the system is grounded, transient overvoltages do not occur and ground-fault current can flow, allowing it to be detected and measured. Also, because a resistor is used to ground the system, the very large and destructive ground-fault currents of solidly grounded systems are absent. Ground-fault relays (such as the SE-701) can be used on feeders to provide selective coordination and the ability to quickly locate or isolate the fault.

### Applications

Resistance grounding is typically applied on transformers and generators where safety and continuity of service are important. A faulted feeder may remain in operation until it is safe to repair the fault, where allowed by the local electrical code.



For information about the NGRM-ENC NGR Monitor Control Panel, see Accessories.

### Benefits

- Eliminate phase-to-ground arc-flash incidents
- Eliminate transient overvoltages
- Reduced point-of-fault damage
- Can provide continuity of service during a ground fault

### Features

- ER-series Sensing Resistor and Current Transformer required for NGR monitoring come pre-installed inside the enclosure
- Can be packaged with a zigzag transformer to resistance ground an ungrounded delta system, or a system with an inaccessible neutral
- SE-325 or SE-330 NGR Monitor can provide continuous NGR monitoring and ground-fault protection; NGR failure will render current-sensing ground-fault protection inoperative
- Stainless steel resistor elements prevent corrosion

## Ordering Information

| NGR | SYSTEM LINE-NEUTRAL VOLTAGE | NGR CURRENT | DUTY CYCLE  | DRAWING NUMBER      | MONITORING COMPONENTS IN NGR ENCLOSURE                         |  | OTHER OPTIONS  | ENCLOSURE STYLE   |
|-----|-----------------------------|-------------|---|---------------------|--|--|--|---|
|     | X                           |             | X   |                     | X  | X  |  |   |
|     |                             |             | C = continuous<br>10 = 10 seconds<br>30 = 30 seconds<br>60 = 60 seconds |                     | ER/ = Includes Sensing Resistor<br>Blank = No Sensing Resistor | CT = CT200<br>E1 = EFCT-1<br>E26 = EFCT-26<br>C26 = SE-CS30-26<br>C70 = SE-CS30-70<br>Contact factory for other choices. | ZZ = Zigzag transformer (Note: may be in separate N3R enclosure) | N3R = Galvanized NEMA 3R<br>N3RSS = Stainless Steel NEMA 3R |
|     | 277, 347, ... 44000         | AMPERES     |   | Assigned by factory |  |  |  |   |
|     |                             |             |   |                     |  |  | Blank = None   |   |
|     |                             |             |   |                     |  |  |  | OPEN = None   |

Note: Order SE-325, SE-330, and SE-701 separately.