

Upgrade Neutral Grounding Resistor Protection with the NGRM500

The **NGRM500** Neutral Grounding Resistor Monitor is ideal for upgrading from an older, obsolete, or inadequate device. Its improved capabilities are certified for protection to the highest standards, such as those of the 2018 & 2021 Canadian Electrical Code. For an easier retrofit, existing current transformers (CTs) and coupling devices (sensing resistors) can often be used. Replace the CT to further enhance system protection and prevent unplanned downtime by upgrading to AD/DC ground-fault protection.

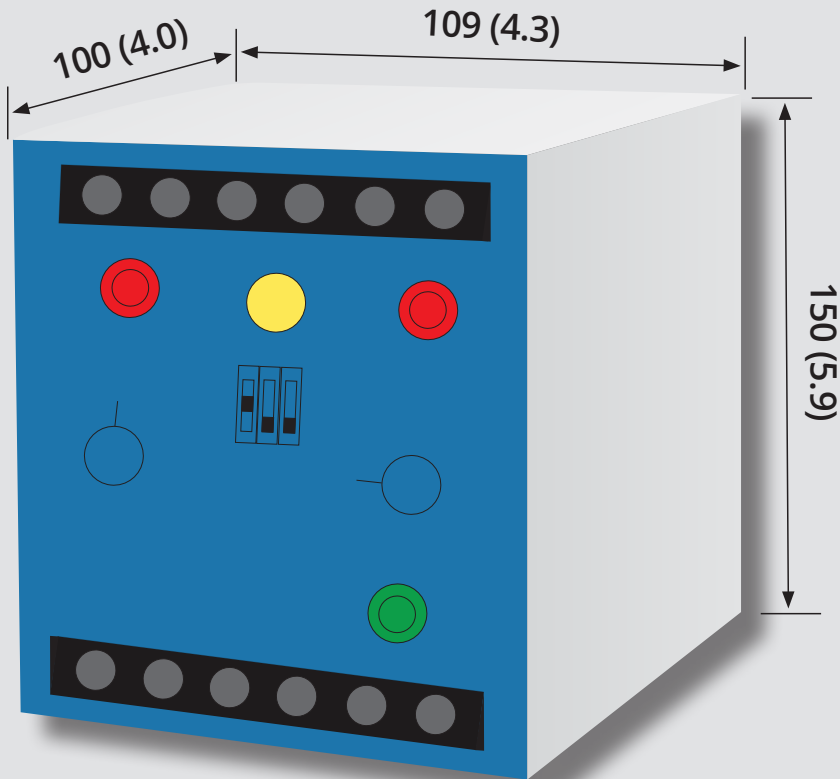
Why Upgrade to an **NGRM500**?

- System stability and protection is assured with accurate NGR resistance measurements that allow detection of open and shorted paths to ground
- Remote monitoring with standard communications
- Neutral voltage monitoring for passive resistor-fault and ground-fault detection
- Optimized for multi-source and main-tie-main systems/ selectable active and passive monitoring
- Improved frequency response for ground-fault protection including DC and harmonics that were previously ignored or undetectable
- Protect systems up to 25 kV with the appropriate coupling device — use the same monitor for a wide range of NGRs



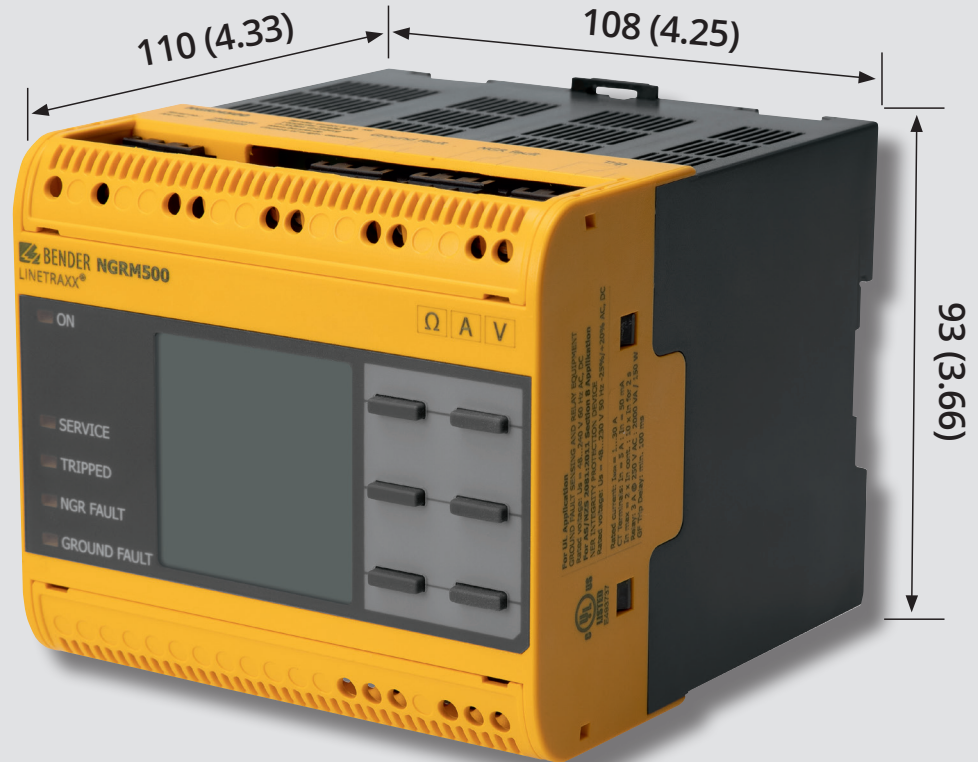
NGRM500 Neutral Grounding Resistor Monitor

Example of a competitor NGR monitor to be replaced



- Single output contact
- No communications options
- Limited ground-fault settings and frequency response

 Bender NGRM500, engineered for ease of retrofit



- Convenient DIN rail mounting
- Easy field calibration via HMI
- Reuses existing control wiring
- Wide range of ground-fault protection settings
- Standard network and webserver communications
- Separate trip, ground-fault, and resistor-fault relay outputs

The **NGRM500** enhances the user experience with easy access to information and settings. In contrast to the unit being replaced, every **NGRM500** can connect to a communications network and can be programmed and monitored with a computer through its webserver interface. Relay outputs provide alarm and trip functions and the alphanumeric display can be used for metering and programming.

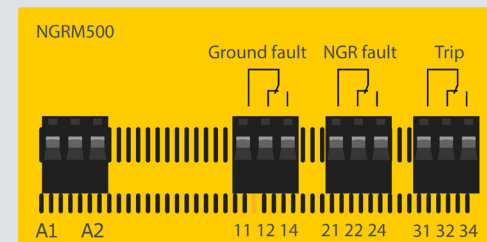
NGRM500 Local Interfaces:

- Separate output contacts allow connection to local pilot devices and a circuit-breaker trip coil
- LCD user interface with multilingual support (English, French, German, Spanish)
- User experience is enhanced and system information is easily accessed via graphical interface and dynamic push buttons

Standard Communications:

- BCOM, proprietary Bender communications protocol
- Modbus TCP/IP Ethernet
- Ethernet/web server with 1000 event, time-and-date stamped data logger
- Modbus RTU

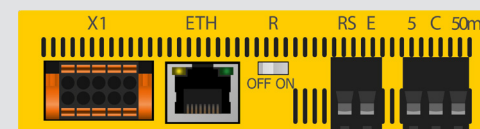
NGRM500 is engineered to ensure simple installation



Top

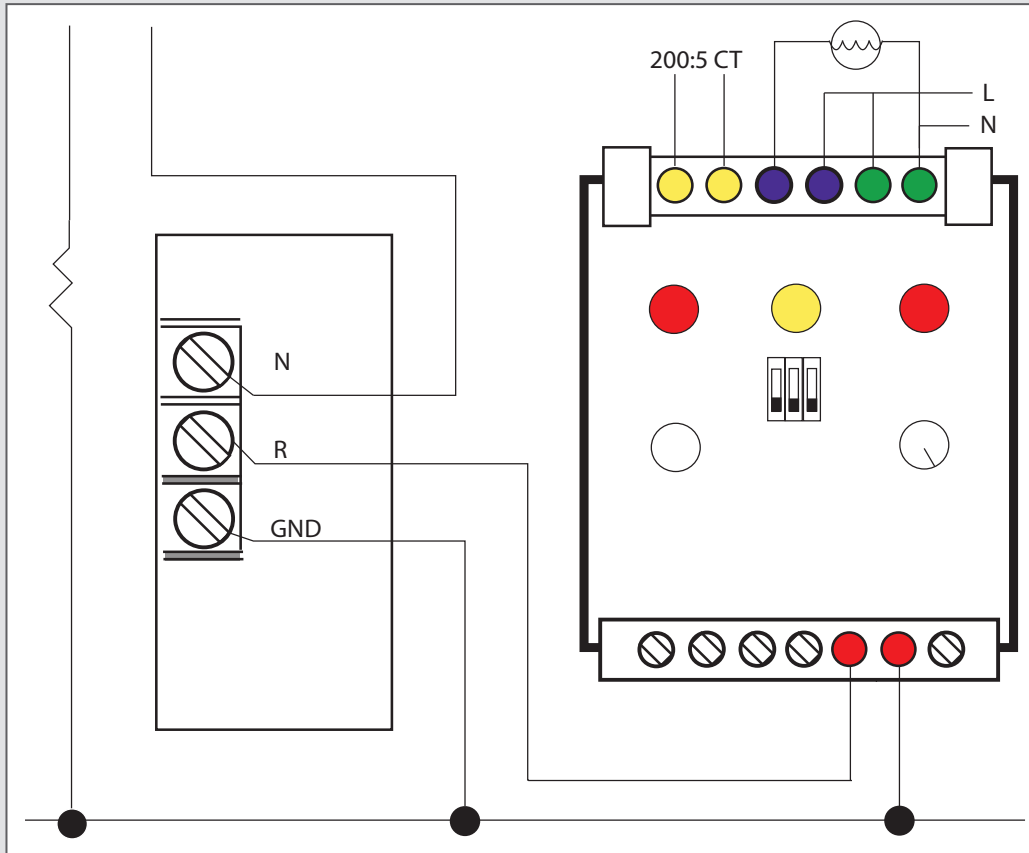


Front



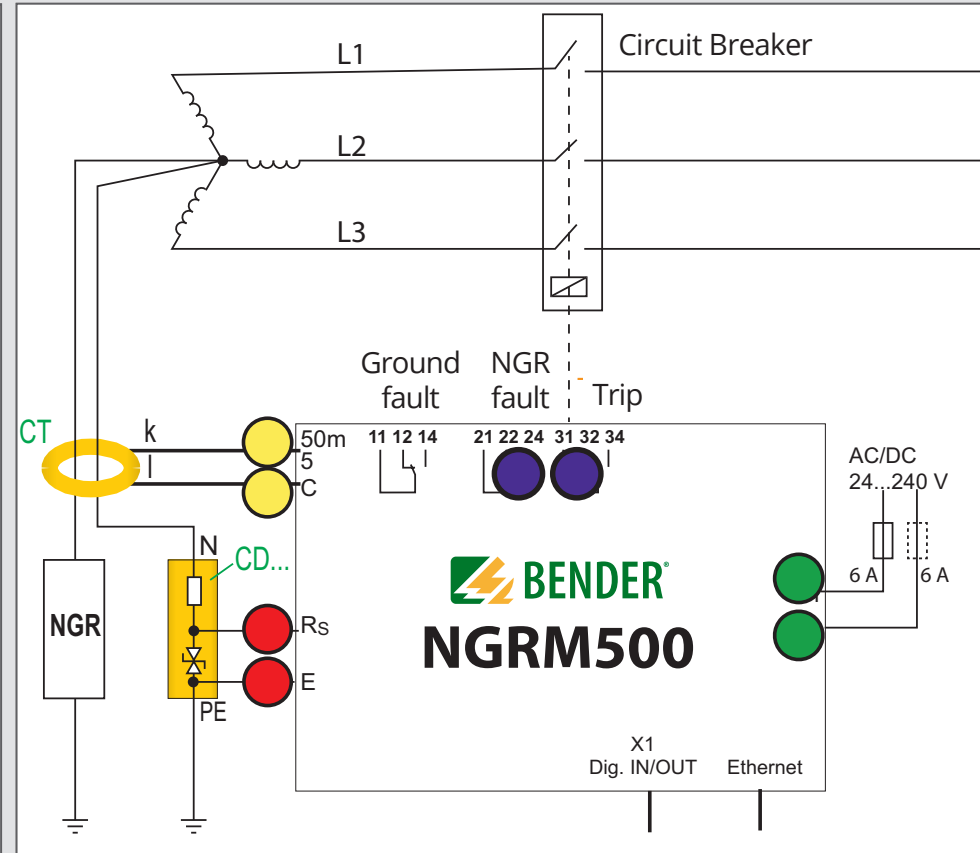
Bottom

Wiring diagram of a competitor NGR monitor to be replaced



- Various models for different control voltages or operating modes
- Mechanical-switch settings subject to failure
- Limited output for remote pilot devices

NGRM500 Wiring Diagram



- Universal power supply allows installation on wider range of power systems
- OEMs can stock one part that will work for many different applications