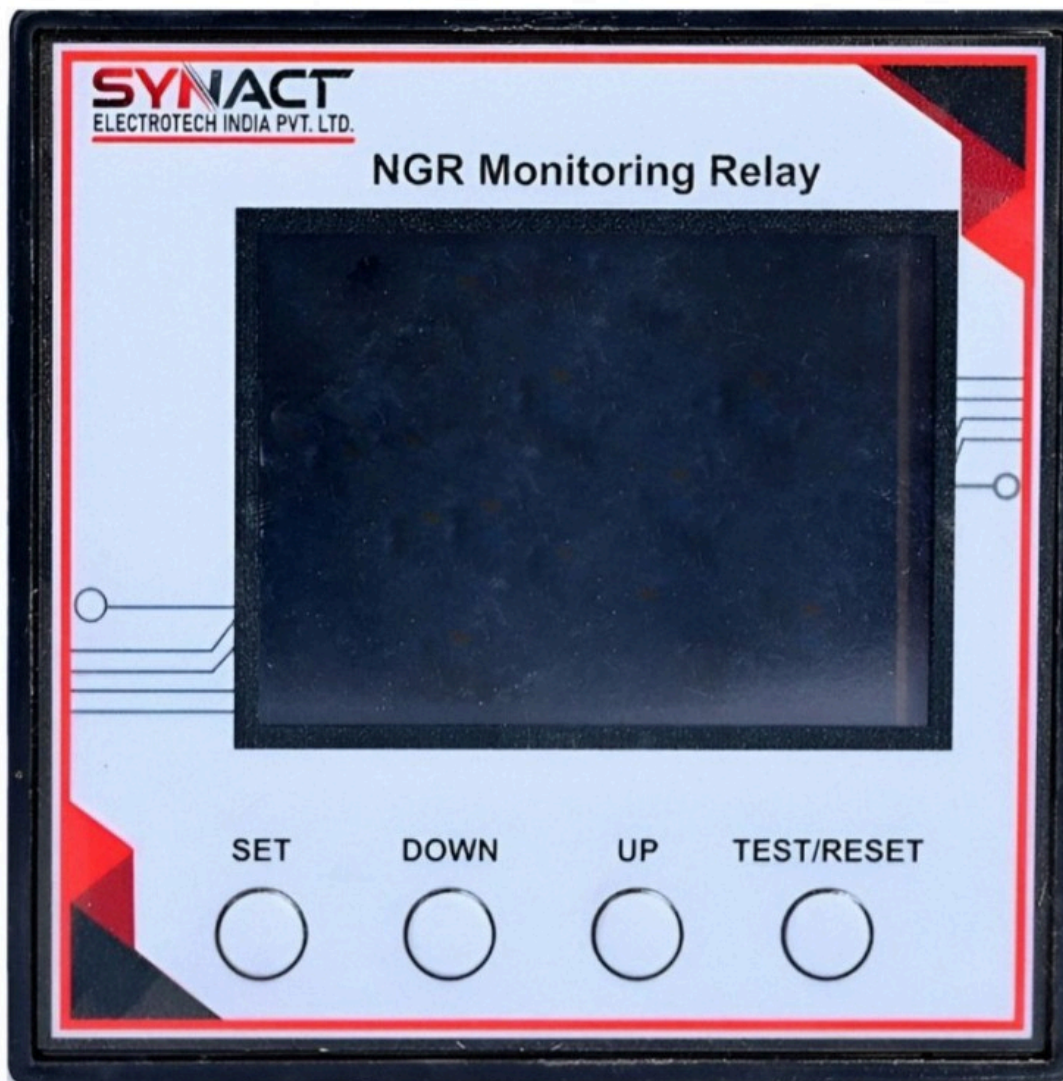


NGR MONITORING
RELAY-NMR
CATALOG



NGR MONITORING RELAY-NMR

NGR-Monitoring Relay, has been developed and made specifically for the monitoring of NGR & Neutral to ground pit. It has a highly .. This relay ensures the fail-safe function of restricted neutral grounding system. It continuously monitors NGR as well as the continuity of neutral grounding connections. It trips the circuit breakers as and when any open circuit occurs in the N.G.R.,. This relay provides earth fault protection. When the fault current exceeds the limit the relay operates to trips the circuit breaker. The relay by its own earth-fault feature protects the N.G.R. independently.

An NGR monitoring relay is a safety device used in resistance-grounded power systems to continuously monitor the health of the Neutral Grounding Resistor (NGR) and detect ground faults. It trips the circuit breaker or provides an alarm if an abnormal condition is detected, ensuring equipment and personnel safety.

- **Ground Fault Protection :**

The primary purpose of an NGR is to limit the ground fault current to a safe, predetermined value to prevent equipment damage and fire hazards. The monitoring relay works in conjunction with the NGR and a current transformer (CT) to sense earth fault current. If the current exceeds the safe limit, the relay activates an output contact to trip the feeder circuit breaker.

- **NGR Health Monitoring :**

The relay continuously checks the continuity and resistance value of the NGR and its connections. An open-circuited NGR can result in a dangerous ungrounded system, while a damaged one may not limit fault current effectively. The relay detects open circuits, loose connections, or significant variations in resistance, providing a fail-safe operation of the grounding system.

- **Preventive Maintenance :**

Early detection of a change in the NGR value allows for planned maintenance, enhancing system availability and reliability.

KEY FEATURES

- **Measures Multiple Parameters :**

NGR monitors typically measure voltage between the transformer neutral and ground, current through the NGR, and the NGR's resistance value for continuity.

- **Adjustable Settings :**

Trip levels (current and voltage) and time delays are often adjustable via push buttons or digital interfaces, allowing customization for specific system requirements.

- **Indications and Alarms :**

The devices use LED indicators or digital displays to show real-time values and identify the type of fault (e.g., NGR fault, ground fault, sensor fault). They also provide output signals for remote alarms or tripping the main breaker.

COUPLING DEVICE HRG.

- Cooling device HRG can be used with an NGR monitor in systems.
- 1.1KV to 11KV neutral voltage.
- The maximum operating altitude is 5000 m above mean sea level.
- The coupling device HRG.... is suitable for Monitoring relay applications up to AC 230 V TO 6900 KV having deferent model for particular system.
- Coupling device HRG to protect from Neutral voltage during fault condition, 2. Protect from Voltage Fluctuation 3.
- Coupling Device HRG to protection circuit of Fail Safe Relay.



CBCT

- The NGR Monitoring relay is a combination NGR monitoring relay and Ground Fault monitoring relay. It measures current through the Current transformer. If current has exceeded to the set values provides relay outputs contact change. NGR live status will be show on display when an abnormal condition is detected.
- Peak current will be measure & save for the reference.
- Current is measured through an external current transformer (CT).
- Adjustable Time Delay: Users can often set the leakage current threshold (e.g., from 1A to 10 A) and the tripping time delay (e.g., 0 to 10 seconds) to suit specific application requirements and avoid nuisance tripping.
- Digital vs. Analog: Digital relays offer continuous display of the actual leakage current value, which helps in proactive monitoring and troubleshooting, unlike analog models which generally only indicate a trip conditions..
- They can have local manual or automatic reset features after a fault is cleared.



NGR PANEL RATING	ITEM WISE DESCRIPTION	COMPLETE SET PART NO.
RELAY For 415 V AC 1 A NGR PANEL	<ul style="list-style-type: none"> • DIGITAL TYPE NGR MONITORING RELAY- NMR1A24D • COUPLING DEVICE - HRG1.1K • CURRENT TRANSFORMER - CTN1A 	NMR1A1.1K24D
RELAY For 3.3KV AC 10 A NGR PANEL	<ul style="list-style-type: none"> • DIGITAL TYPE NGR MONITORING RELAY - NMR10A24D • COUPLING DEVICE - HRG3.3K • CURRENT TRANSFORMER - CTN10A 	NMR10A3.3K24D
RELAY For 3.3KV AC 50 A NGR PANEL	<ul style="list-style-type: none"> • DIGITAL TYPE NGR MONITORING RELAY - NMR50A24D • COUPLING DEVICE - HRG3.3K • CURRENT TRANSFORMER - CTN50A 	NMR50A3.3K24D
RELAY For 3.3KV 100 A NGR PANEL	<ul style="list-style-type: none"> • DIGITAL TYPE NGR MONITORING RELAY- NMR100A24D • COUPLING DEVICE - HRG3.3K • CURRENT TRANSFORMER - CTN100A 	NMR100A3.3K24D

NGR PANEL RATING	ITEM WISE DESCRIPTION	COMPLETE SET PART NO.
RELAY For 6.6 KV 10 A NGR PANEL	<ul style="list-style-type: none"> • DIGITAL TYPE NGR MONITORING RELAY- NMR10A24D • COUPLING DEVICE - HRG6.6K • CURRENT TRANSFORMER - CTN10A 	NMR10A6.6K24D
RELAY For 6.6 KV 50 A NGR PANEL	<ul style="list-style-type: none"> • DIGITAL TYPE NGR MONITORING RELAY- NMR50A24D • COUPLING DEVICE - HRG6.6K • CURRENT TRANSFORMER - CTN50A 	NMR50A6.6K24D
RELAY For 6.6 KV 100 A NGR PANEL	<ul style="list-style-type: none"> • DIGITAL TYPE NGR MONITORING RELAY- NMR100A24D • COUPLING DEVICE - HRG6.6K • CURRENT TRANSFORMER - CTN100A 	NMR100A6.6K24D

NGR PANEL RATING	ITEM WISE DESCRIPTION	COMPLETE SET PART NO.
RELAY For 11 KV 10 A NGR PANEL	<ul style="list-style-type: none"> • DIGITAL TYPE NGR MONITORING RELAY- NMR10A24D • COUPLING DEVICE - HRG12K • CURRENT TRANSFORMER - CTN10A 	NMR10A12K24D
RELAY For 11 KV 50 A NGR PANEL	<ul style="list-style-type: none"> • DIGITAL TYPE NGR MONITORING RELAY- NMR50A24D • COUPLING DEVICE - HRG12K • CURRENT TRANSFORMER - CTN50A 	NMR50A12K24D
RELAY For 11 KV 100 A NGR PANEL	<ul style="list-style-type: none"> • DIGITAL TYPE NGR MONITORING RELAY- NMR100A24D • COUPLING DEVICE - HRG12K • CURRENT TRANSFORMER - CTN100A 	NMR100A12K24D

- NOTE :**
- USE ONLY RATED HT CABLE AS PER NGR RATING FOR GROUND & NEUTRAL CONECTION.
 - USE 2 RUN FOR GROUND & NEUTRAL CABLE AS PER DRAWING.
 - SET CURRENT & DELAY TIME AS PER NGR ONLY



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