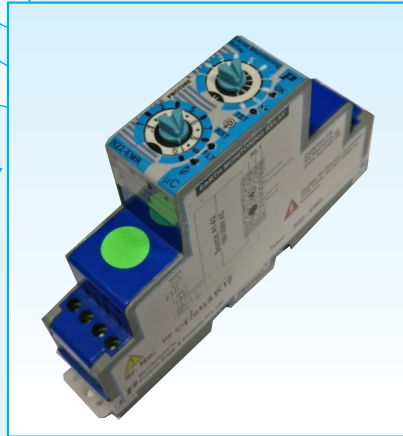


PROTIME®



## N22 Series Earth Monitoring Relay

**N22 - EMR**

### Special Features

- Only of its kind Earth Monitoring relay based on N-E Potential Measurement
- Micro controller based True RMS Measurement
- Earthing not Connected & Earthing weak protections in Single Unit
- Fail safe Mode of operation
- Auto Reset
- Wide Auxiliary power supply range from 90-270V AC/DC

### Technical Data

- |                          |  |
|--------------------------|--|
| 1) Supply Voltage        | - 90-270V AC/DC  |
| 2) Output Contacts       | - one change over (potential free)                     |
| 3) Switching duty        | - 6A resistive at 250V AC or 24V DC                    |
| 4) Electrical Life       | - 10 <sup>5</sup> operation at designed switching duty |
| 5) Relay Status          | - Fail Safe = De-energised in fault conditions         |
| 6) Signal                | - Across Neutral & Earth                               |
| 7) Ranges                | - 1-10V  |
| 8) Time Delays           | - 1 - 10Sec  |
| 9) Reset                 | - Auto Reset   |
| 10) Mounting             | - Din channel  |
| 11) Approximate Weight   | - 100gm  |
| 12) Dimension            | - 22.5mm(W) X 110(D) X 73.5mm(H)                       |
| 13) ENCLOSURE:           | - ABS Type = N22                                       |
| 14) Operating Temp & RH: | -10°C, +55°C up to 80%                                 |

## Applications:

A common feature of all computers & other electronic equipment is the sensitivity to supply Voltage fluctuations like Spikes etc. These may damage the hardware or corrupt the data on software. To ensure clean supply, computers are frequently installed on dedicated clean circuits. They also have inbuilt suppression & filtering circuitry. These Filters leak the unwanted components of electric supply to earth.

In a facility/installation, Where computers & similar Equipments are an appreciable part of electrical load, the earthing is required to carry a significant amount of continuous leakage current. Any break in earth connection will mean that the isolated section will rise to potentially lethal voltage. This will also render the filter circuits ineffective making the computers prone to failures due to voltage spikes.

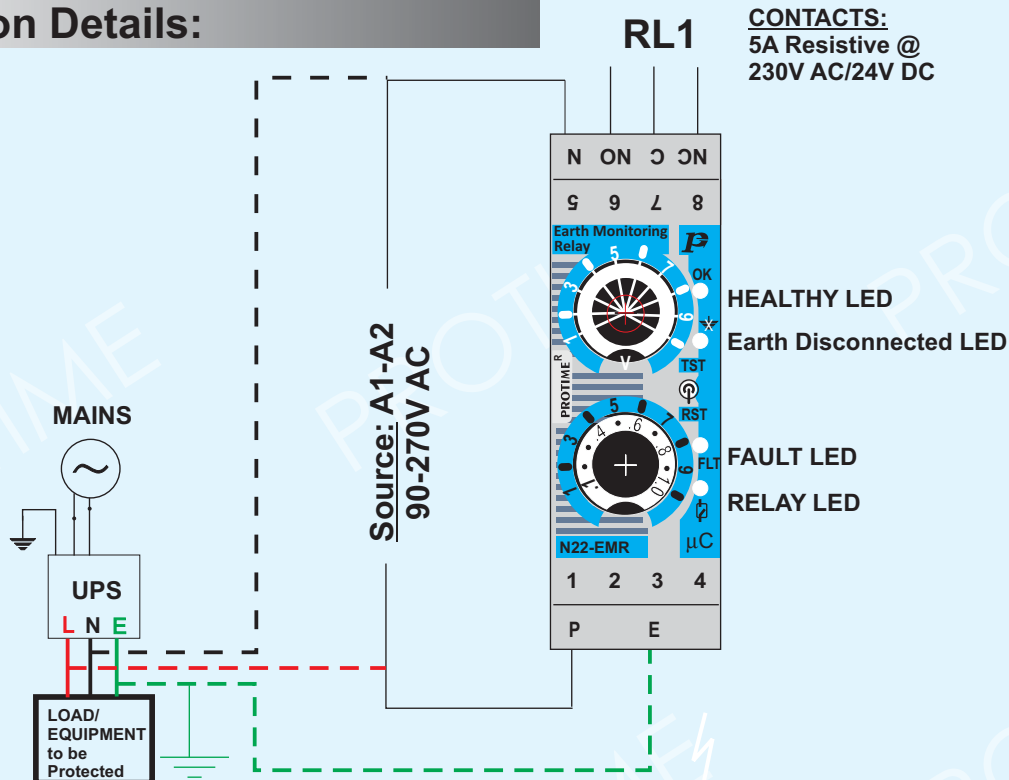
Therefore as recommended in IS 3043(Section 39.2.4.2), It is necessary to provide a protective device to monitor the continuity of the protective earth connection & provide means of automatic disconnection in case of failure or at least give an audio alarm to user.

The PROTIME's Earth Monitoring Relay senses the rise in voltage between earth & Neutral Conductor to detect the integrity of the earthing connection. It is advisable to install such relays at the UPS supply points & couple of user points.

## OPERATION:

The N22-EMR continuously senses Potential between earth & neutral terminal on load side, If Earth gets disconnected OR Resistance of earth increases, The Potential difference between Neutral & Earth may increase. The relay will give output for tripping or audio alarm when such voltage rises above the limit set on the dial. The time delay for relay output is optional feature. The relay also protects Critical Equipment for Earthing NOT CONNECTED.

## Connection Details:



## HOW TO ORDER ?

Ordering Pattern (example)- **N22-EMR**

**N22-EMR** - **1**  
 |                      |  
 Code                      Tripping Range  
 A- 1-10V