

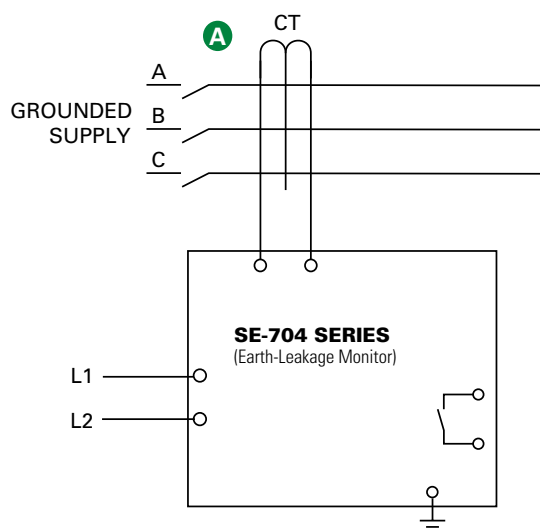
# Ground-Fault Protection

SE-704 SERIES (PGR-4704)

## Earth-Leakage Monitor • Grounded Systems



## Simplified Circuit Diagram



## Ordering Information

| ORDERING NUMBER | CONTROL POWER     |
|-----------------|-------------------|
| SE-704-OU       | 120/240 V ac/V dc |
| SE-704-OD       | 12/24 V dc        |
| SE-704-OT       | 48 V dc           |
| SE-704-03       | 24 V ac           |

| ACCESSORIES              | REQUIREMENT |
|--------------------------|-------------|
| ELCT30 or SE-CS30 Series | Required    |
| PGA-0500                 | Optional    |
| PMA-55, PMA-60           | Optional    |

Note: For optional conformal coating please consult factory.

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## Description

The SE-704 is a microprocessor-based ground-fault relay for resistance- and solidly-grounded systems. It offers very sensitive ground-fault detection as low as 10 mA and can be used on systems with significant harmonic content. The output contacts can be connected for use in protective tripping circuits (such as for marina or boatyard feeder circuits) or in alarm indication circuits. The analog output can be used with a PLC or a meter. The SE-704 can be integrated with a shunt trip circuit breaker to meet CE code C22.1-21 Section 78-052(2) and NEC article 555.35(A)(1), 555.35(3), and 555.53 for marina applications.

## Features & Benefits

| FEATURES                                   | BENEFITS                                                                                                        |
|--------------------------------------------|-----------------------------------------------------------------------------------------------------------------|
| <b>Adjustable pickup (10 mA-5 A)</b>       | Adjustable trip setting provides a wide range of low-level protection and system coordination                   |
| <b>Adjustable time delay (30 ms-2.0 s)</b> | Adjustable trip delay allows quick protection and system coordination                                           |
| <b>Output contacts</b>                     | Form A and Form B ground-fault output contacts for operation of separate annunciation and trip circuits         |
| <b>Analog output (0-5 V &amp; 0-1 mA)</b>  | Allows for connecting an optional meter (PGA-0500) or control system                                            |
| <b>CT-Loop monitoring</b>                  | Alarms when CT is not connected                                                                                 |
| <b>Selectable contact operating mode</b>   | Selectable fail-safe or non-fail-safe mode allows connection to shunt or undervoltage breaker coil              |
| <b>Harmonic filtering</b>                  | Eliminates nuisance tripping                                                                                    |
| <b>Non-volatile trip memory</b>            | Retains trip state when de-energized to simplify troubleshooting                                                |
| <b>Microprocessor based</b>                | No calibration required saves maintenance cost                                                                  |
| <b>Universal power supply</b>              | Allows operation in application where one side of PT is faulted, provides flexibility for numerous applications |

## Accessories

A



### ELCT30 or SE-CS30 Series Current Transformer

Required zero-sequence current transformer specifically designed for low level detection. Flux conditioner is included to prevent saturation.



### PGA-0500 Analog % Current Meter

Optional panel-mounted analog meter displays ground-fault current as a percentage of the set-point or 5 A.

## Specifications

|                               |                                                                      |
|-------------------------------|----------------------------------------------------------------------|
| <b>IEEE Device Numbers</b>    | Ground fault (50G/N, 51G/N)                                          |
| <b>Input Voltage</b>          | See ordering information                                             |
| <b>Dimensions</b>             | <b>H</b> 75 mm (3.0"); <b>W</b> 55 mm (2.2"); <b>D</b> 115 mm (4.5") |
| <b>Trip Level Settings</b>    | 10 mA-5.0 A                                                          |
| <b>Trip Time Settings</b>     | 30-2000 ms                                                           |
| <b>Contact Operating Mode</b> | Selectable fail-safe or non-fail-safe                                |
| <b>Harmonic Filtering</b>     | Standard feature                                                     |
| <b>Test Button</b>            | Standard feature                                                     |
| <b>Reset Button</b>           | Standard feature                                                     |
| <b>CT-Loop Monitoring</b>     | Standard feature                                                     |
| <b>Output Contacts</b>        | Isolated Form A and Form B                                           |
| <b>Approvals</b>              | UL Listed (E340889), CSA, CE (European Union)<br>C-Tick (Australian) |
| <b>Analog Output</b>          | 0-5 V & 0-1 mA                                                       |
| <b>Conformally coated</b>     | Optional                                                             |
| <b>Warranty</b>               | 5 years                                                              |
| <b>Mounting</b>               | DIN, Surface (standard)<br>Panel (with PMA-55 or PMA-60 adapter)     |