

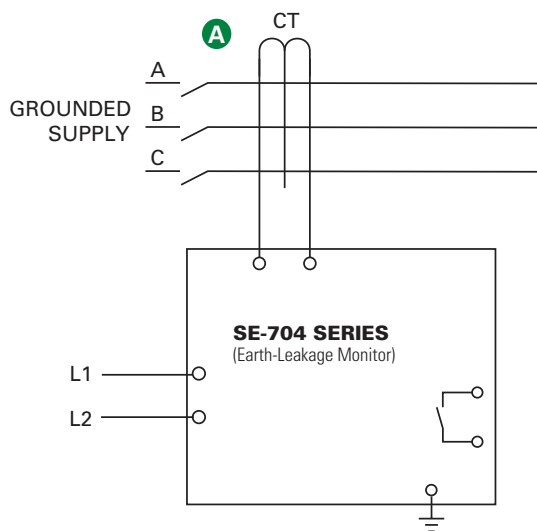
# Protection Relays and Controls

## GROUND-FAULT PROTECTION—GROUNDED SYSTEMS

### SE-704 SERIES (PGR-4704) Earth-Leakage Monitor



### Simplified Circuit Diagram



### Ordering Information

ORDERING NUMBER	CONTROL POWER
SE-704-0U	120/240 V ac/V dc
SE-704-0D	12/24 V dc
SE-704-0T	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 SE-704 provides feeder-level protection or individual-load protection. The output contacts can be connected for use in protective tripping circuits or in alarm indication circuits. The analog output can be used with a PLC or a meter.

### 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) 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) Panel (with PMA-55 or PMA-60 adapter)