

### Features

- Option of Three Different Frequencies
- Eliminate Monitor Crosstalk
- Remove Multiple Ground Problems
- Extended Cable Lengths Are Possible
- Monitor and Control Over Power Cables



The GAI-TRONICS Ground Sentinel® along with the associated filters is designed to monitor the integrity of the ground circuit of power distribution circuits in coal mines. Either the three-phase wires or a pilot wire can be used as a return signal path for the Ground Sentinel. If the ground check circuit has 15 ohms or less loop resistance, the internal relay will be energized, and the circuit breaker that feeds power to the cable can be energized. A disruption of the ground check circuit that lasts longer than one-fourth of a second will de-energize the relay and trip the circuit breaker. The time delay prevents false trips. Three LED's indicate the condition of the ground check circuit. The three-frequency system is intended for the applications on circuits where the ground circuit can't be isolated by ARC TRAPS or elimination of two ARC TRAPS is desired.

### Specifications

#### Mechanical:

Size (LWH) ..... 7.46" x 2.32" x 5.62" (189.5 x 58.9 x 142.7mm)  
(Fits on one-half GM1000 Foot Print)

Construction..... Stainless Steel

Serviceability..... One plug-in board contains all electronics, including relay

#### Power:

Supply Voltage ..... 117V ± 15% 60 Hz (105-135)

Supply Voltage Dip For One Minute

No Trip w/Good Loop ..... Down to 84V

#### Transmitter:

Frequency ..... 4000, 3125 or 2250 Hz (NOM)  
(Request Frequency When Ordering)

#### Receiver:

Loop Resistance for Trip  
(over voltage and temperature range) ..... 13 ohms ± 2 ohms

#### Receiver: Continued...

Trip Time Delay (after loop opened)..... 250 msec (max)

Instantaneous Trip..... Opens relay coil circuit

Resistance for Pickup ..... 15 ohms ± 2 ohms

Output Short Circuit Trip..... 0-1 ohm

Loop Current Indication..... YEL LED brightness proportional to loop resistance

### Ordering Information

Ground Sentinel®..... GM8900/2250 Hz  
GM8900/3125 Hz

Filter, 3 Phase, 1000V, 2250 Hz..... FI2567

Filter, 3 Phase, 1000V, 3125 Hz..... FI2569

Ground Wire Trap..... GM1004