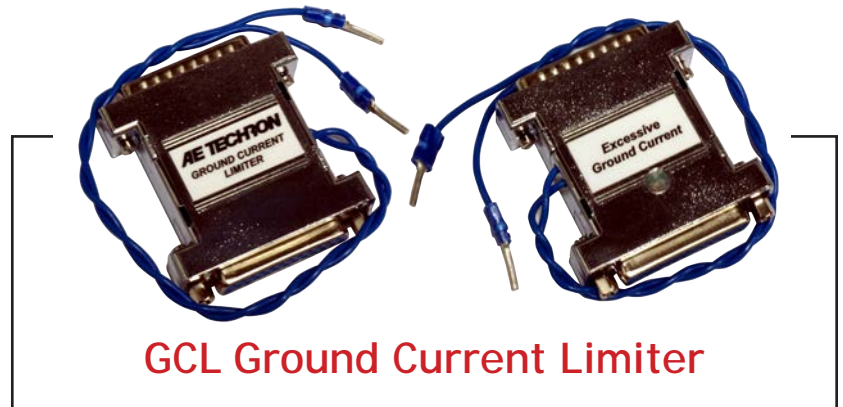


AE Techron's GCL provides active protection against excessive ground current. It is superior to the factory-default ground-current protection on many AE Techron amplifiers (a 2.7-ohm resistor between the amplifier's Chassis Ground and COM or Sampled Common output terminals) because it places the amplifier in Standby, provides a visual indication that a fault has occurred, and can be easily reset.

The GCL protection module is ideal for environments where recirculating ground currents are likely or amplifiers might be incorrectly connected. It is recommended when amplifiers will be connected in multiple configurations or will be used by inexperienced staff members.

The GCL combines several functions into one convenient DB-25 package. A comparator circuit monitors the voltage difference between the system's input ground and earth/safety ground. If the voltage differential between these two grounds exceeds $\pm 4V$, the GCL will automatically place the amplifier in Standby. In addition, the GCL has a second level of protection that monitors the current flow between signal ground and earth ground. When the current between these exceeds safe levels, the current is limited. This combination of current limit and voltage monitoring provides very robust protection against real-life measurement mistakes and DUT failures.



Features

- Provides active protection against excessive ground current.
- Replaces the 2.7-ohm resistor used on many AE Techron amplifiers.
- Automatically places the amplifier in Standby.
- Red LED notifies the user of GCL activation.
- Fast, easy installation.

When the GCL module protections are activated, the red LED located on the top of the GCL will illuminate and the amplifier will be placed in Standby. When the ground potential between the two terminals decreases to a safe level, the red LED will turn off, and the amplifier will be brought out of Standby mode.

The GCL plugs into the DB-25 Interlock/IO connector located on the amplifier's back-panel SIM input card and can be used on all AE Techron amplifiers that use a SIM card. Since the GCL is a "feed-through" device, the DB-25 Interlock/IO connector can still be used for other purposes and applications when the GCL is in place.

Specifications

Power Supply: Self-powered through DB-25 connector

Activation Level: $\pm 4V$ (1.5A)

Dimensions(HxWxD): 2.5 in. x 2.2 in. x 0.7 in. (64 mm x 56 mm x 18 mm)

Installation

Refer to Figure 1 and complete the following steps to install the GCL module.

1. Remove the 2.7-ohm resistor installed between the COM or Sampled Common terminal and the Chassis Ground terminal located on the amplifier's back panel.
2. Plug the GCL module into the DB-25 connector located on the SIM input card on the amplifier's back panel. Tighten the GCL's two mounting screws to attach the GCL firmly to the amplifier back panel.
3. Attach one wire from the GCL to the amplifier's COM/Sampled Common output terminal.
4. Attach the other wire from the GCL to the amplifier's Chassis Ground output terminal.



Figure 1 - GCL installed on 7224 amplifier