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## Speaker Isolation Module for 100V PA lines.

**Model: PISOL**

To prevent PA loudspeakers in a secure area from being used as microphones, the Speaker Isolation Module is installed within the secure area between an incoming 100V speaker circuit and the speakers to be secured. The module can also be used on 70V systems. In this case, the secure speakers will also be driven at 70V.

The secured speakers are monitored for open and short circuits by the use of a 56K End of Line (EOL) resistor. The EOL resistor used by the system providing the 100V input signal does not need to be 56K. It can be what ever value is required by that system.

Any faults are relayed by placing an 8.2K ohm resistor in parallel with the input 100V line.

Multiple loudspeakers up to a maximum of 20 watts may be connected to the 100V Isolated Output of the module. Up to 2 speaker circuits may be connected.

The load presented by the secure speakers (up to 20W max) is driven by the amplifier driving the incoming 100V Input of this module. This module does not have an inbuilt amplifier. The module draws a maximum current of 70 milliamps at 28 volts and is supplied from the MECP panel. The module does not need any additional power supplies or batteries to be installed. The isolated output reproduces all ISO tones and PA announcements. The Speaker Isolation Module has three diagnostic LEDs to indicate status of the module which can be seen without opening the enclosure. It is fully compliant with AS2220, AS1670.1-2004 and AS1670.4-2004.

### Technical data

Supply Voltage	18 Volts – 28 Volts
Quiescent Supply Current	35mA at 28V
Maximum Supply Current	70mA at 28V (typ 60mA at 24V)
Power dissipation	2 watts Max (70mA at 28V) 0.8W quiescent
100V Input	Incoming 100V PA signal
100V Output	In parallel with 100V input. For connection of additional unsecured speakers
100V Isolated Output	100V signal to secured speakers
Fault signalling	8.2K ohms in parallel with the input 100V line.
Isolated output EOL resistance	56k ohms 2% Metal film resistor. e.g. Altronics R7600 or Farnell (Element 14) 9469060
Enclosure Size	W150mm x L110mm x D70mm

### Advantages of using the Speaker Isolation Module PISOL

1. Removes maintenance and inspection as required by AS1851 within secure areas as the module does not require 240 volt field power supplies and back up batteries as is the case with the alternate Audio Amplifier that is utilized for this purpose.
2. Provides continuous monitoring of isolated speakers for fault conditions.
3. Easy to install on existing wiring.
4. Latest Technology.
5. Small unit that can be mounted any where within the secure area.
6. Diagnostic LEDS mounted on each module can be used by any service technician to diagnose problems. eg loss of power, open and short circuit faults without opening the enclosure.
7. Any number of speakers up to 20 watts can be connected.
8. The isolation module utilises existing power supply from the MECP. This confines the maintenance to the MECP.
9. Does not have any significant heat source that requires additional ventilation.



