GIT100 Transformer

GROUND LOOP ISOLATION

Product Features

- Passive Device
- Wide Bandwidth
- Attenuates Ground Loop Interference
- Compatible with Coaxitron® Control Systems
- Easily Added to Existing Systems

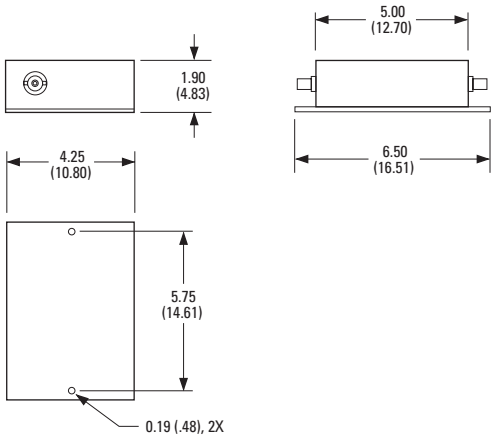
The **GIT100** is a ground loop isolation transformer which reduces ground loop interference in video signals and can easily be added to existing systems. The **GIT100** provides a high degree of common mode isolation at power line frequencies, but passes signal frequencies from DC to over 200 MHz.

The **GIT100** is useful where a video signal is transmitted via cable between points with different ground potentials. Differences in ground potentials are typically caused by unbalanced power line loads, and the peak-to-peak magnitude may vary from zero to more than ten volts. The larger voltages are common for distances of a few thousand feet, not for small separations. Potentials of greater than 0.5 Vp-p are commonly found between two points in the same building.

Because the **GIT100** is passive and weatherproof, it can be conveniently located anywhere in your coax cable where ground loop potentials exist. More than one unit can and may be needed in situations where ground loop potential exceeds 10 Vp-p.

The **GIT100** was developed to minimize problems stemming from the existence of ground loop potentials (common mode voltages). In addition to providing an effective reduction of common mode voltages (CMV) at power line frequencies, it is even more effective at higher frequencies.

The **GIT100** is especially suited for use with Coaxitron® control systems because the passive design allows for bi-directional transmission of control and video signals.



NOTE: VALUES IN PARENTHESES ARE CENTIMETERS; ALL OTHERS ARE INCHES.

TECHNICAL SPECIFICATIONS

MODEL

GIT100	Passive ground isolation transformer compatible with Coaxitron control systems

VIDEO

Ground Loop Voltage	Maximum CMV of 10 Vp-p at 60 Hz
Video Performance Characteristics	Equivalent in all respects to approximately 200 feet (60.96 m) of RG59/U coax
Common Mode Rejection (CMR)	See Table A and Figure 1
Connectors	BNC

GENERAL

Unit Weight	3 lb (1.35 kg)
Shipping Weight	4 lb (1.81 kg)

CERTIFICATIONS/RATINGS

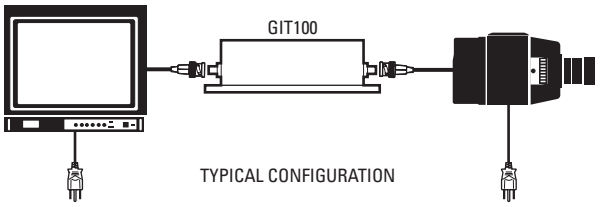
- UL Listed
- Meets NEMA Type 1 standards

INSTALLATION

Although the GIT100 does not perform in all the manners of classical transformers, installation requirements are similar. A transformer must be placed between any two points where the cable shield is grounded and common mode voltage exists.

The GIT100 may be placed anywhere in your video signal cable. This allows convenience to dictate its location. More than one unit can be utilized in situations where the CMV exceeds 10 Vp-p.

Table I and Figure 1 show that common mode rejection is inversely proportional to cable length and approximately proportional to the third root of frequency (rejection increases at approximately 6 dB per decade).



TYPICAL CONFIGURATION

Table A. Common Mode Rejection (CMR)

Length of RG59/U	Effective CMR at 60 Hz
200 feet (60.96 m)	43 dB
400 feet (121.9 m)	37 dB
600 feet (182.9 m)	33 dB
800 feet (243.8 m)	31 dB
1,000 feet (300.8 m)	29 dB

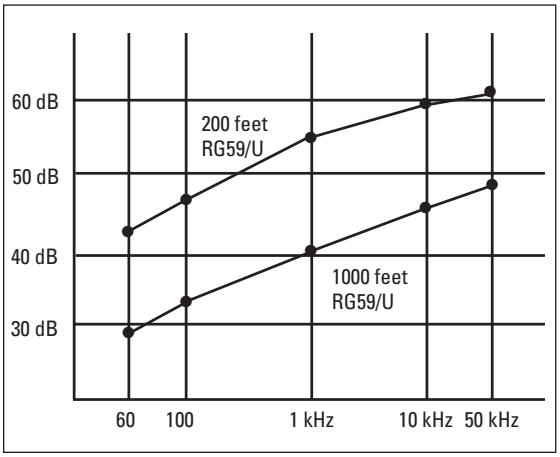


Figure 1. Effective Ground Loop Voltage Attenuation

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