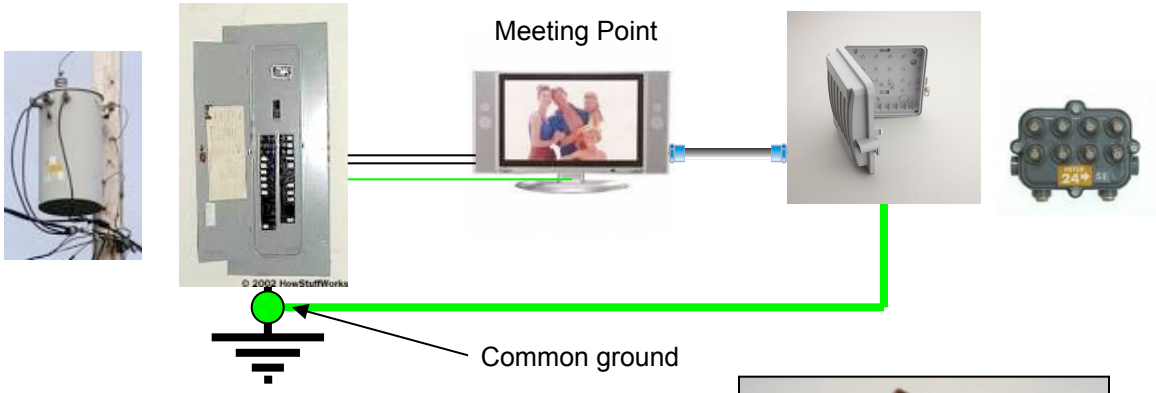
Drop Isolator Model DI-2kV

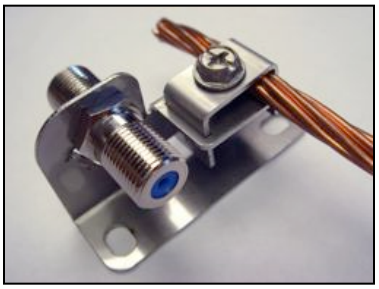
Ground Bonding and Ground Isolation

Within most buildings, there are several electrical services that need to coexist. The most common services are electrical power, telephone, and cable television. Since these services come from different sources outside the building, they must have a common electrical reference inside the building to prevent hazards like electrical shock or damage to equipment that provides a meeting point for different services. This common reference point is known as GROUND.

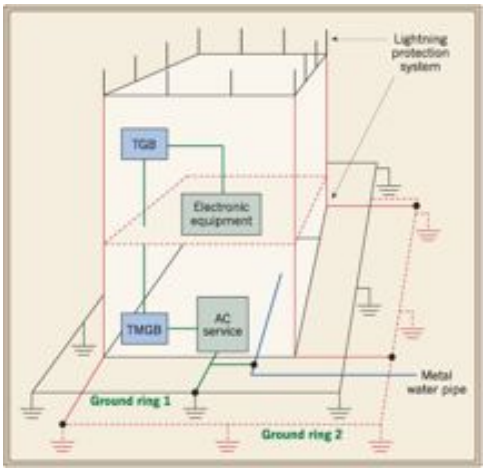
In order to ensure safety inside a building, the National Electrical Code has developed construction guidelines for service wiring. One of the fundamental principles is that all services must be bonded to a common ground at the entrance to the building so that there will be no voltage differences between these services inside the building.



Each service has its own bonding device. The CATV service relies on a bonding block that enables a good connection between the coax sheath and a ground bonding wire that connects to a common primary ground reference point.



CATV Bonding Block
Model SB1-GND-SS



Grounding a building

It is the responsibility of the electrical service provider to establish the primary ground reference point. This may be difficult in some areas depending upon the nature of the local geology. Dry sandy soil or rock may make it difficult to establish a good connection.

Ph: 732-446-2626 • Fx: 732-446-2717 • Web: www.extreme-broadband.com

DI-2kV Drop Isolator

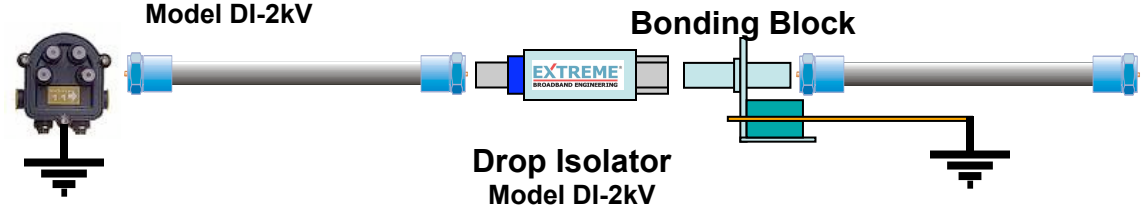
Despite the efforts of the NEC to ensure safety through construction codes, these are not laws and it is up to the discretion of local municipalities to comply with them. Consequently, there are bound to be situations where grounding and bonding are inadequate or even non-existent.

Ground bonding is difficult when the ground of the electrical service and the ground of the CATV outside plant are at different voltage potentials. The CATV service provider may find that the neutral return current of the electrical system is taking the easiest path to ground through the coax sheath. Ground currents have also been linked to inconsistent modem operation.

Ground Bonding gone wrong

Model DI-2kV

In order to compensate for this bonding difficulty in the outside plant and still comply with safety codes inside the building, it is possible to decouple the outside plant CATV ground from the electrical service ground at the coax connection to the bonding block by using a ***Drop Isolator***. **The Drop Isolator allows only the RF spectrum to enter the CATV system inside the building.**



SPECIFICATIONS	Model DI-2kV	
Parameter	Frequency (MHz)	Specification (dB)
INSERTION LOSS (Max)	5-50	0.2
	50-450	0.3
	450-750	0.3
	750-1000	0.6
RETURN LOSS (Min)	5-50	22
	50-450	24
	450-750	22
	750-1000	20
GALVANIC ISOLATION	2120 VDC for at least 1 minute not exceeding 0.7mA leakage current 240 VRMS 50/60 Hz not exceeding 2mA RMS leakage current	
IMPEDANCE (Ohms)	75	

Ph: 732-446-2626 • Fx: 732-446-2717 • Web: www.extreme-broadband.com