From Lightning to Transients

At any moment, there are approximately 1,800 thunderstorms occurring on earth, or an average of 16 million storms each year. In the U.S., lightning detection systems monitor about 25 million flashes of lightning from the cloud to ground every year.

Lightning flashes can produce damaging transient voltages that can interfere with electronic components, trip circuit breakers or blow fuses. Even lightning strikes hundreds of feet away from a power line can induce large, damaging transients.

In addition to lightning, other sources can cause transient over-voltages:

- Switching of power company equipment
- Operation of power factor correction devices
- Switching and clearing of faults on transmission and distribution lines and utility substations

What is an Intersystem Bonding Termination?

Intersystem bonding is the low-impedance connection of grounding from different systems, which creates an equipotential plane during transient events. Certain systems and equipment in the home are susceptible to damage when grounding systems are not interconnected, such as:

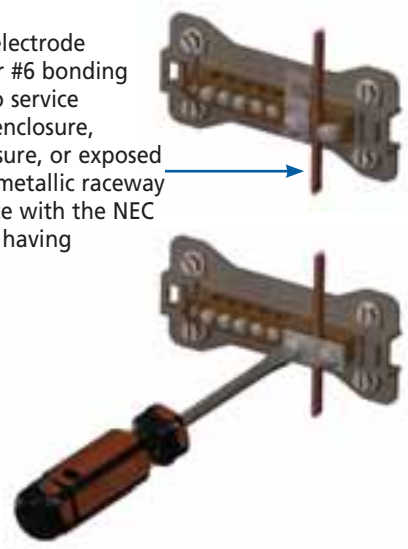
- The main electrical service ground electrode system
- Separately derived AC power systems
- Telecommunications systems, including telephone, CATV, dish satellite systems and radio system cables
- Lightning protection systems

The National Electrical Code (NEC®) defines an Intersystem Bonding Termination as "a device that provides a means for connecting communication(s) systems grounding conductor(s) at the service equipment or at the disconnecting means for buildings or structures supplied by a feeder or branch circuit."

IBTB Installation

Connection to electrical service ground

Grounding electrode conductor or #6 bonding conductor to service equipment enclosure, meter enclosure, or exposed nonflexible metallic raceway in accordance with the NEC or authority having jurisdiction.



Bonding conductors to other systems

www.erico.com

ERICO®

E828B-NAEN DE632LT09NAEN 00420M9

Intersystem Bonding Termination for Residential and Small Commercial Facilities

ERICO®

NEC Requirements:

The 2008 edition of the NEC requires the installation of an intersystem bonding termination at the electrical source for all new construction. Per the NEC, there are three acceptable methods to bond systems in a building:

1. A set of terminals securely mounted to the meter enclosure and electrically connected to the meter enclosure. The terminals shall be listed as grounding and bonding equipment.
2. A bonding bar near the service equipment enclosure, meter enclosure or raceway for service conductors. The bonding bar shall be connected with a minimum 6 AWG copper conductor to an equipment grounding conductor(s) in the service equipment enclosure, meter enclosure or exposed nonflexible metallic raceway.
3. A bonding bar near the grounding electrode conductor. The bonding bar shall be connected to the grounding electrode conductor with a minimum 6 AWG copper conductor.

Intersystem Bonding Termination (IBTB)

Designed to meet the requirements of NEC Article 250.94 "Bonding for Other Systems," the Intersystem Bonding Termination, part of the ERITECH® line of products from ERICO®, is an easy-to-install way to interconnect and terminate grounding conductors from power service, telephone, CATV or radio and television antennas.

The IBTB is mounted adjacent to the meter base or service entrance equipment. It includes corrosion-resistant, stainless steel mounting hardware and is easily accessible for connection and inspection. The lay-in connection clamp (#6 AWG – #2 AWG) allows easy installation of the grounding electrode conductor in one continuous length, where possible. The IBTB also features a polymeric base and housing, which is impact-resistant, UV-stabilized and meets UL® requirements for weatherability performance.

IBTB features:

- Ideal for residential and small commercial facilities
- Accommodates (5) 14 - 4 AWG bonding conductors and (1) 6 – 2 AWG grounding electrode conductor
- UL Listed as an intersystem bonding termination
- Integral mounting base enables easy installation
- Includes mounting hardware
- Connections to grounding electrode conductor — does not rely on meter base enclosure bonding connection
- Meets the requirements of 2008 NEC Article 250.94

Installation of the IBTB

The IBTB should be installed in close proximity to the electrical and communications service entrances. The top clamp of the IBTB was designed to accommodate the main grounding electrode conductor as a through-feed. This allows the conductor to be installed in one continuous length in accordance with NEC requirements. If this is not feasible, a bonding conductor from the main ground electrode conductor can be installed to the IBTB.

All of the required mounting hardware and anchors are included to install the IBTB.
It is ideal for CATV, telephone, satellite or structural lightning protection systems to make a convenient and easy bonding location for optimal intersystem bonding performance.

The IBTB is available at electrical distributors throughout the U.S. Contact your local ERICO representative for more information or visit www.erico.com.

Part No.	IBTB
Weight (lbs)	0.3
Depth (in)	1.41
Width (in)	2.01
Length (in)	4
Conductor Size Range	14 AWG – 2 AWG