

# GROUNDING, BONDING & CONNECTIVITY PRODUCTS

**FOR DATACOM APPLICATIONS**



# Grounding, Bonding & Connectivity Products

## ERICO Facility Electrical Protection

Pentair offers a full range of grounding, bonding and connectivity products for data centers and other datacom applications worldwide. Pentair products include grounding and bonding accessories, surge protection and lightning protection products, and welded electrical connections.

## Grounding and Bonding

Pentair offers an extensive line of grounding and bonding products, which includes ground rods and accessories, signal reference grids, chemical ground rods, ground enhancement material (GEM), couplers, clamps, inspection wells, grounding and perimeter bus bars and ground test instruments.

## Surge Protection

ERICO surge protection products are designed to protect against damaging electrical surges on power and communications lines caused by lightning, building systems and other switching events.

## Lightning Protection

Direct and indirect lightning strikes can pose many risks to businesses, including damaging buildings and critical equipment. ERICO lightning protection products offer a variety of solutions to help protect valuable equipment and personnel and to avoid disruption and downtime.

## Welded Electrical Connections

ERICO CADWELD welded electrical connections are used to connect the grounding and bonding conductors to each other and to the ground electrode system, including ground rod electrodes, building steel and rebar. ERICO CADWELD connections provide a permanent, low-resistance connection needed to create a long-lasting, reliable bonding network. ERICO CADWELD connections will not deteriorate, cannot loosen and are made with inexpensive, lightweight and portable equipment. ERICO CADWELD EXOLON is a filtered, smokeless connection system designed for making connections indoors.



Lightning Protection Cable



ERICO CADWELD Lugs



Telecommunications Ground Bar (TGB) and CADWELD Lugs



Lightning Air Terminals



Cable Runway Ground Strap (CRGS6)



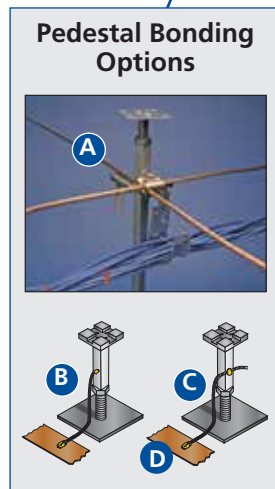
Signal Reference Grid (SRG)







Low Impedance Riser (LIR)

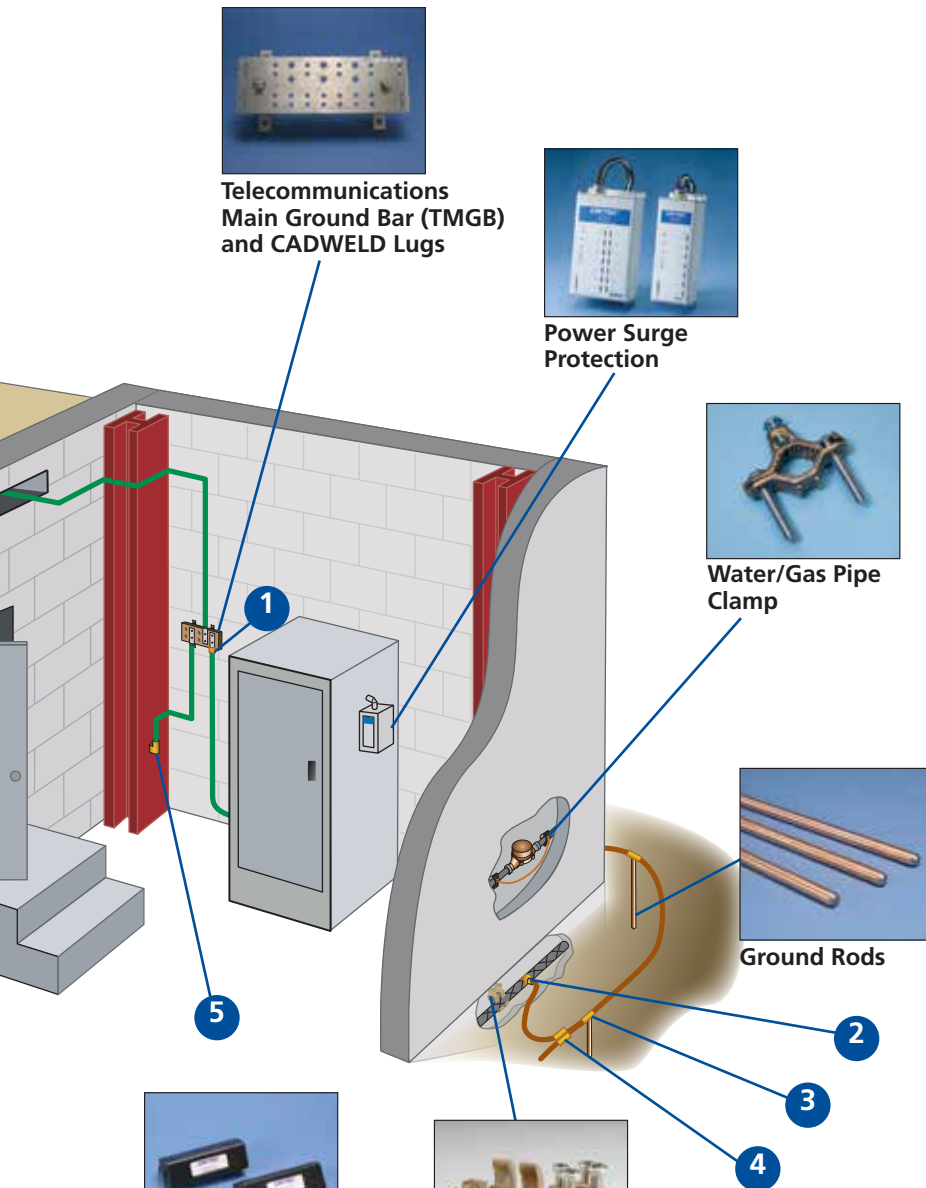


Common Bonding Network Jumper (CBNJ09)



- A**  Universal Pedestal Clamp (MBNUPCJ82, MBNUPCJ240)
- B**  ERICO CADWELD Connection to Pedestal (VS)
- C**  ERICO CADWELD Through Connection to Pedestal (VG)
- D**  ERICO CADWELD Connection to SRG (HA)

# For Datacom Applications



**Telecommunications Main Ground Bar (TMGB) and CADWELD Lugs**



**Power Surge Protection**



**Water/Gas Pipe Clamp**



**Ground Rods**



**Rebar Clamps**



**CAT 6 Network Surge Protector**








**Coaxial Surge Protector**



**Subscriber/High Speed Line Surge Protector**

## ERICO CADWELD CONNECTIONS

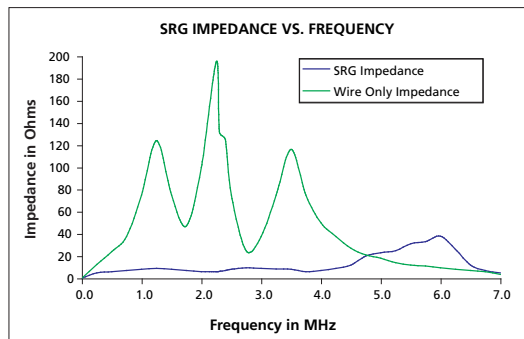
- 1**  Cable-to-Lug (GL)
- 2**  Cable-to-Rebar (RH)
- 3**  Cable-to-Ground Rod (GT)
- 4**  Cable-to-Cable (PT)
- 5**  Cable-to-Steel (VF)

NOTE: ERICO CADWELD connections shown are typical. Connections for any configuration and conductor are available to meet specific application requirements.

## Prefabricated Signal Reference Grid (SRG)

The SRG is an integrated high-frequency, low-impedance signal reference grid structure, which consists of a network of flat copper strips welded at the crossovers in accordance with recommendations found in IEEE® 1100 "IEEE Recommended Practice for Powering and Grounding Electronic Equipment." The SRG is also referred to as a "Supplementary Bonding Grid" (SBG) per TIA® 607.

The SRG lies directly on the sub-floor under the raised-floor structure and is used to interconnect metal frames, racks, enclosures, common terminals for signal level power and the electrical distribution grounding system. The SRG is used as a ground reference system for IT equipment by creating an equipotential ground reference plane over a large range of frequencies from DC through the Megahertz range. At high frequencies, flat strip conductors have considerably lower inductive reactance than concentric stranded or solid conductors and the configuration of the SRG results in a lower impedance system, which limits potential differences between data systems and other systems during voltage transients or other power system disturbances. The following graph from IEEE 1100 shows the impedance of an SRG system versus a wire-only grounding system.



## SRG Features and Benefits

- Economical and maintenance-free
- Recommended in IEEE® 1100
- Reduces common-mode noise
- Increases noise immunity to electric fields
- Reduces capacitive coupled interference
- Compliant with Information Technology Industry Council Information Letter "Guidelines For Grounding Information Technology Equipment (ITE)" and the National Electrical Code.

IEEE is a registered trademark of The Institute of Electrical and Electronics Engineers, Incorporated.  
TIA is a copyright of Telecommunications Industry Association

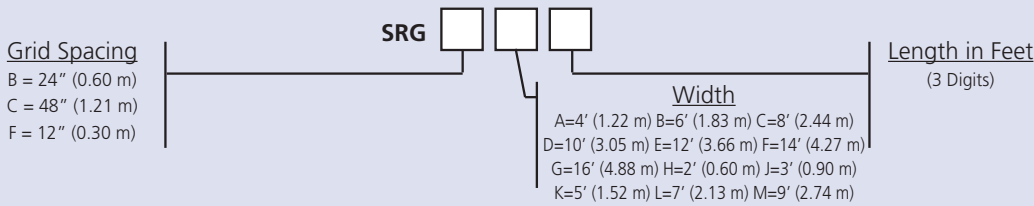
# GROUNDING, BONDING & CONNECTIVITY PRODUCTS FOR DATACOM APPLICATIONS

## Signal Reference Grid

**SRGBD100** 2" x 26 (50 x 0.40 mm) Gauge Copper Strip, 2' x 2' (0.60 x 0.60 m) Grid Spacing, 10' x 100' (3.04 x 30.48 m) Roll

**SRGBE100** 2" x 26 (50 x 0.40 mm) Gauge Copper Strip, 2' x 2' (0.60 x 0.60 m) Grid Spacing, 12' x 100' (3.66 x 30.48 m) Roll

SRGs can also be custom manufactured to suit your needs. SRG Part Numbering System:



## SRG Connector

**MBNC82, MBNC240** Mesh Bonding Network Connector for bonding pedestal to signal reference grid or mesh.  
**MBNC82, #8 - #2 AWG, solid or stranded MBNC240, #2 - 4/0 AWG, stranded**  
 Connector can be used independent of pedestal in stand-alone applications.



**MBNUPCJ82, MBNUPCJ240** 7/8" - 2" Round or Square Pedestals  
**MBNUPCJ82, #8 - #2 AWG, solid or stranded MBNUPCJ240, #2 - 4/0 AWG, stranded**



**EK16** Ground Clamp, #10 - #2 (Up to 25 mm<sup>2</sup>) conductor. Use on round and square pedestals up to 1" (Up to 25mm diameter pedestal)



## Direct-Burial Grounding Clamps

**RC70** Heavy-Duty Rebar Clamp, #8 - 2/0 (Up to 8 mm) AWG Conductor, #3 - #6 Rebar (8 - 18 mm)



**RC100** Heavy-Duty Rebar Clamp, #8 - 4/0 (Up to 8 mm) AWG Conductor, #6 - #11 (18 - 38 mm) Rebar

## Water Pipe Clamps

**CWP1JU** Bronze Pipe Clamp 1/2" to 1" (13 - 25 mm diameter) pipe, #10 - 2 (Up to 35 mm<sup>2</sup> conductor) AWG

**CWP2JU** Bronze Pipe Clamp 1-1/4" to 2" (32 - 50 mm diameter) pipe, #10 - 2 (Up to 35 mm<sup>2</sup> conductor) AWG

**CWP4JU** Bronze Pipe Clamp 2-1/2" to 4" (60 - 100 mm diameter) pipe, #10 - 2 (Up to 35 mm<sup>2</sup> conductor) AWG



## Telecom Main Grounding Bus Bars (TMGB) & Telecom Grounding Bus Bars (TGB)

**TGBA20L12PT**, TGB, 1/4" x 2" x 20" (6.35 x 50.8 x 508 mm), Tin-plated copper, TIA Standards compliant

**TGBA25L14PT**, TGB, 1/4" x 2" x 24" (6.35 x 50.8 x 610 mm), Tin-plated copper, TIA Standards compliant

**TMGBA20L27PT**, TMGB, 1/4" x 4" x 20" (6.35 x 101.6 x 508 mm), Tin-plated copper, TIA Standards compliant

**TMGBA25L33PT**, TMGB, 1/4" x 4" x 24" (6.35 x 101.6 x 610 mm), Tin-plated copper, TIA Standards compliant

\*Remove "T" suffix for untinned (plain) copper. Contact ERICO for other sizes and configurations.



## Copper-Bonded Ground Rods

**615880**, Copper-bonded Ground Rod, 5/8" x 8' (14.2 mm Diam. x 2.40 m)

**615800**, Copper-bonded Ground Rod, 5/8" x 10' (14.2 mm Diam. x 3.05 m)

**613480**, Copper-bonded Ground Rod, 3/4" x 8' (17.2 mm Diam. x 2.40 m)

**613400**, Copper-bonded Ground Rod, 3/4" x 10' (17.2 mm Diam. x 3.05 m)



In addition to the above grounding, bonding and SRG products, Pentair can provide design assistance to protect your data center, including the proper selection of power and data surge protection devices, CADWELD exothermic connections to suit individual grounding system requirements and the design of a lightning protection system to comply with any lightning protection standard worldwide. Please contact Pentair or an authorized factory representative for further information.

**WARNING**  
 Pentair products shall be installed and used only as indicated in Pentair's product instruction sheets and training materials. Instruction sheets are available at [www.ericopentair.com](http://www.ericopentair.com) and from your Pentair customer service representative. Improper installation, misuse, misapplication or other failure to completely follow Pentair's instructions and warnings may cause product malfunction, property damage, serious bodily injury and/or death, and void your warranty.

© 2008 - 2013, 2015 Pentair All Rights Reserved  
 Pentair, CADDY, CADWELD, CRITEC, ERICO, ERIFLEX, ERITECH and LENTON are owned by Pentair or its global affiliates.  
 All other trademarks are the property of their respective owners. Pentair reserves the right to change specifications without prior notice.

[www.ericopentair.com](http://www.ericopentair.com)