Insulated busbar systems are most commonly used in switchgear, switchboards, and busway (or bus duct) installations. Also referred to as a solid insulated system (SIS), insulated copper and aluminum busbars are manufactured from solid aluminum or copper conductors, which have a solid insulating medium between each phase conductor and ground.

Designed to operate at phase potential, insulated busbars are the power component of choice in applications ranging from transformer bushing connections to underground mining power distribution. The use of insulated copper conductors can enhance your design by minimizing circuit footprints and reducing turning radii while eliminating creepage and clearance issues, resulting in more watts with less space.

Your installation will also benefit from improved:

Safety - By reducing chance of harm to personnel.

Reliability - By reducing chances of flashover and short circuits that cause damage to equipment and costly outages. A practical example would be the reduction in fault events as a result of wildlife crossing the phases.

Protection - Of conductors in industrial facilities with high amounts of trace materials like oils, sawdust, moisture, and caustic materials.

Reduced Impedance - From surface corrosion and defects

**Insulation Options:**

Storm Power Components offers two types of Bus Bar insulation:

**Air Insulated (AIS)** - Conductors are bare or electroplated and are supported by standoff insulators, while the phases are separated by air only. These installations work best where space is not an issue and cost may be a factor.

**Solid Insulated (SIS)** - Conductors are covered in a solid insulating medium consisting of a thermoplastic or thermostet material. Solid Insulated Busbar is recommended for increased safety, reliability and performance.

**Plating Available:**

- Medium phosphorus electroless Nickel Plating
- Full Immersion electroplating
- Strike plating

**Material Choices:**

- Bright Tin or Matte Tin Nickel
- Silver 100% Lead Various Tin/Lead Alloys

**Standoff Insulators:**

- Fiberglass-reinforced thermo-set polyester
- Ceramic
- UV-Protected

Because of the high-ampacity, low-voltage drop and the resilience to environmental factors, insulated busbars are widely used in feeders to large motors in the following applications:

- Chemical processing plants
- Drilling operations
- Light rail transit
- Machine / welding equipment
- Mining equipment
- Pipeline pumping
- Pulp and paper plants

**EriFlex:**

Flexible Insulated Bus Bar

**Dielectric Finishing:**

- Expy Powder-Coated via Electro Spray and Fluidized Bed
- Laminated or Multilayer Bus Bar:
  - Mylar (PET)
  - Tedlar (PVD)
  - Teonex (PEN)
  - Nomex
  - Kapton
  - Epoxy Glass Board (FR4)

**LINK TO BUSBAR AMPACITY TABLES >**