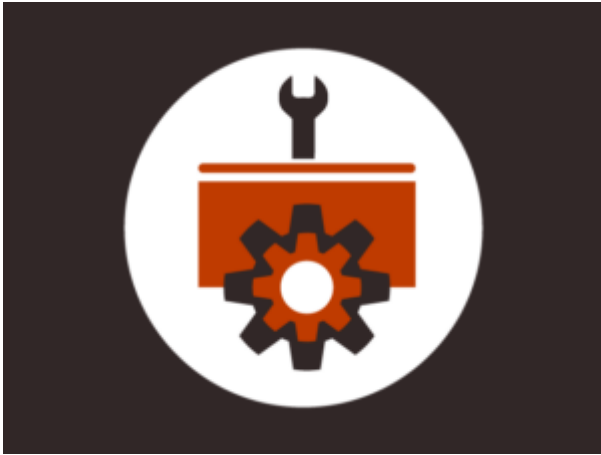


# Commercial and Industrial Surge Protective Devices Infographic



# SURGE PROTECTIVE DEVICES

## Protecting Your Business from Downtime and Data Loss

Surges can occur in **any facility** and according to the National Electrical Manufacturers Association, **80%** of all surges **originate inside facilities**.

### THE NATIONAL ELECTRICAL CODE REQUIRES SURGE PROTECTION IN:



EMERGENCY  
SYSTEMS



ELEVATORS &  
ESCALATORS



WIND ELECTRIC  
SYSTEMS



INDUSTRIAL  
MACHINERY



FIRE PUMP  
CONTROLLERS

### TYPE OF SURGE PROTECTION

Use **Type 1, 2, and 3 SPDs** for the best level of protection.

### Extra Protection

#### Type 1

Permanently connected Surge Protective Device. Protects against external and internal surges. May be installed **inside or outside** the facility.



#### Type 2

Permanently connected Surge Protective Device installed in, or next to, main panel. Protects against **internal and external** surges.



#### Type 3

Point of use Surge Protective Device. Provides **limited protection** to devices plugged directly to SPD.



### SURGE PROTECTIVE DEVICES PROTECT AGAINST:



EQUIPMENT DAMAGE



EQUIPMENT DOWNTIME



LOST REVENUE

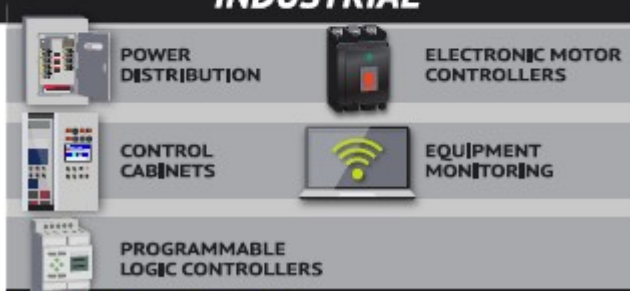
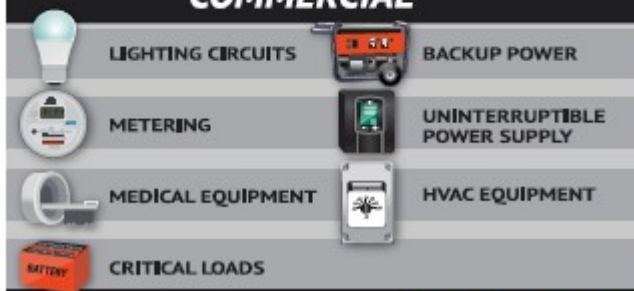


PRODUCTIVITY LOSS

The following can be damaged by surge and should have a level of surge protection to prevent **damage, downtime, and lost revenue**.

### COMMERCIAL

### INDUSTRIAL



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Surges can occur in any facility and according to the National Electrical Manufacturers Association, 80% of all surges originate inside facilities.

### The National Electrical Code Requires Surge Protection In:

- Emergency systems
- Elevators & Escalators
- Wind Electric Systems

- Industrial Machinery
- Fire Pump Controllers

### **Type of Surge Protection**

Use Type 1, 2, and 3 SPDs for the best level of protection

- Type 1:  
Permanently connected Surge Protective Device. Protects against external and internal surges. May be installed inside or outside the facility.
- Type 2:  
Permanently connected Surge Protective Device installed in, or next to, main panel. Protects against internal and external surges
- Extra Protection  
Type 3  
Point-of-use Surge Protective Device. Provides limited protection to devices directly plugged into SPD.

### **Surge Protective Devices Protect Against:**

- Equipment Damage
- Equipment Downtime
- Lost Revenue
- Productivity Loss

The following can be damaged by surges and should have a level of Surge Protection to prevent damage, downtime, and lost revenue.

#### **Commercial:**

- Lighting Circuits
- Metering
- Medical Equipment
- Critical Loads
- Backup Power
- Uninterruptable Power Supply
- HVAC Equipment

#### **Industrial:**

- Power Distribution
- Control Cabinets
- Programmable Logic Controllers
- Electronic Motor Controllers
- Equipment Monitoring

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