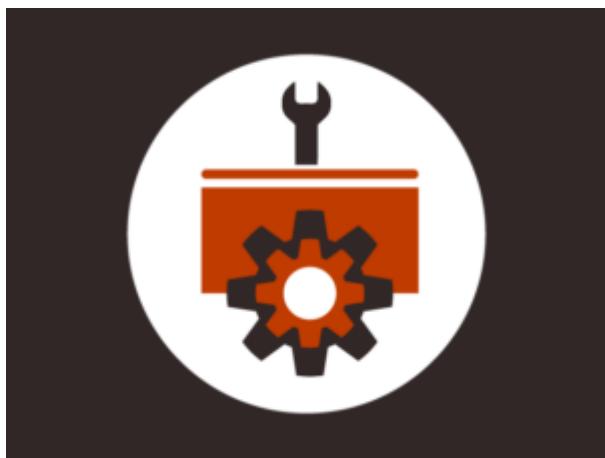


Commercial and Industrial Surge Protective Devices Infographic



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



LIGHTING CIRCUITS



BACKUP POWER



METERING



UNINTERRUPTIBLE POWER SUPPLY



MEDICAL EQUIPMENT



HVAC EQUIPMENT



CRITICAL LOADS

INDUSTRIAL



POWER DISTRIBUTION



ELECTRONIC MOTOR CONTROLLERS



CONTROL CABINETS



EQUIPMENT MONITORING



PROGRAMMABLE LOGIC CONTROLLERS

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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

Source: Republished with permission from *Electrical Safety Foundation International (ESFI)*