

# SURGE PROTECTIVE DEVICES

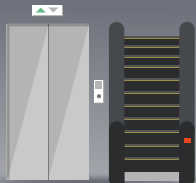
## Protecting Your Business from Downtime and Data Loss

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

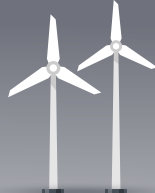
### THE NATIONAL ELECTRICAL CODE REQUIRES SURGE PROTECTION IN:



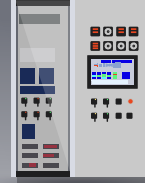
EMERGENCY SYSTEMS



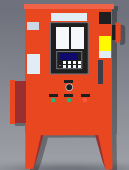
ELEVATORS & ESCALATORS



WIND ELECTRIC SYSTEMS



INDUSTRIAL MACHINERY



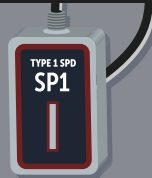
FIRE PUMP CONTROLLERS

### TYPE OF SURGE PROTECTION

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

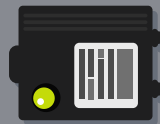
#### Type 1

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



#### Type 2

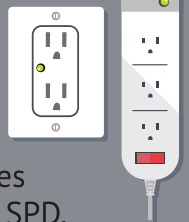
Permanently connected Surge Protective Device installed in, or next to, main panel. Protects against **internal and external** surges.



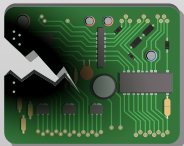
### Extra Protection

#### Type 3

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