

LIGHTNING & POWER SURGES

Protecting your personnel and your property against lightning strikes and electrical surges are essential elements in a three-step safety plan.

1. PROTECT YOURSELF AND YOUR PEOPLE

Lightning threatens lives as well as property. Please be sure that you and your personnel take the following precautions during thunderstorms:

- Do not use the telephone except in cases of an emergency.
- Stay away from electrical appliances, fireplaces, windows, doors and metal objects.
- Anyone outside should seek shelter immediately in an enclosed building or vehicle.
- In cases where no shelter is available, find a low lying area and crouch down with feet together and hands on your knees until the danger passes.
- Avoid isolated trees, high ground or large open areas during a thunderstorm.
- If someone is injured by a lightning strike, call for help immediately and then administer first aid if there is a qualified person.

PROTECTING YOUR BUSINESS



PENNSYLVANIA LUMBERMENS MUTUAL
INSURANCE COMPANY

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FOR FURTHER INFORMATION, CONTACT THE LOSS CONTROL SERVICES DEPARTMENT AT PLM, 800.752.1895

**ONE COMMERCE SQUARE
2005 MARKET STREET, SUITE 1200
PHILADELPHIA, PA 19103-7008**

**MAIN 800.752.1895
FAX 215.625.9097
WEB WWW.PLMINS.COM**

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2. PROTECT YOUR PROPERTY

While no protection system can stop lightning from striking, a good grounding system can prevent serious injury or property damage. You should know that a good system:

- Provides a direct path for the lightning to follow to ground; and
- Prevents destruction, damage, injury or death as it travels that path.

A good lightning protection system should feature:

- At least two ground rods, also known as electrodes, planted at least 10 feet deep
- Down conductors
- Gutters or other grounded metals as required
- Air terminals (lightning rods) located within two feet of corners of chimney (where applicable)
- An antenna mast connected to roof conductor
- Air terminals (lightning rods) spaced 20 feet apart along the roof ridges and within two feet of ridge ends
- Dormer protection
- Roof projections, e.g. weather vanes or roof devices, should be connected to a lightning protection system

3. PROTECT YOUR EQUIPMENT

Many of our modern business devices—telephones, computers, copiers and security systems—are vulnerable to electrical surges. Surges can destroy costly items in your business, including electrically powered machinery and equipment, as well as any sophisticated systems using microchip technology. Electrical surges occur when the voltage in your business's electrical system increases and returns to normal within millionths of a second. Properly installed surge protection devices or SPDs, used in tandem with a good grounding system, should protect your electronic and electrical appliances from all but the most severe electrical surges.

PROTECT THE POINT OF SURGE ENTRY

An SPD should be installed at the electrical meter or main electrical panel and at each item to be protected, including:

- Electronic equipment/computers
- Appliances with multiple utilities, such as a computer with a telephone line and an electrical line
- Pumps
- Electric door openers
- Electric motors
- TV screens and monitors
- Electronic security and fire detection systems
- Any devices using microchip technology

FOR A FAIL-SAFE PLAN

- Choose an SPD that will not conduct electricity when it has failed
- Disconnect all appliances when you will be away
- Make sure that all surge protection devices are properly rated for equipment you are protecting

Most of us comprehend the power of lightning as an awesome natural force...

Unfortunately, many of us also tend to disregard the potential danger which lurks in every thunderstorm. The danger is very real. Lightning is the visible discharge of electrical energy. That energy seeks a path to the ground—your building, property, trees, equipment or even your employees can provide that pathway.

Look over the list below. For each of the points that apply to you, the likelihood of a lightning strike is greater.

- Previous lightning strike
- Located in a thunderstorm-likely area
- Located in an open or isolated area
- Situated on top of a hill
- Have tall trees nearby
- Have a metal wood-burning chimney, brick or stone chimney
- Have a metal ridge vent

Evaluate your potential risk for lightning strike and take adequate precautions.

ONE FINAL NOTE

Electrical Meter Surge Protection Device

Greater damage is likely to result from a lightning strike if your business lacks surge protection on the main panel of the incoming service.

A surge protection device installed at the electric service entrance is very important to divert most of the surge energy to the ground. In most cases, your local utility will install this item, or, if this service is not available, a qualified electrician can install one.

Get the Professional Assistance You Need to Protect Your Property

Make sure your lightning protection system is installed by a qualified electrical contractor or certified electrician.

