

Cosmic SPD Type 1 & Type 2 Surge Protection Solution

Simple. Economical. Essential Surge Protection.

Protect your electrical installation and valuable electronic equipment from sudden high-voltage spikes and transient surges with **Cosmic SPD Type 1 & Type 2 Surge Protection Solutions**.

Electrical surges can occur due to lightning activity, switching operations, grid disturbances and other transient electrical events. Although these surges may last only for a very short duration, they can damage sensitive electronic components and connected equipment.

The Cosmic SPD solution provides a **simple and economical first level of protection against high-energy electrical spikes and surges**.

Available Models

Single Phase

Suitable for homes, apartments, shops, offices and other single-phase electrical installations.

Three Phase

Suitable for commercial buildings, industries, hospitals, hotels, IT facilities, institutions and other three-phase installations.

What Does an SPD Protect Against?

The Cosmic Surge Protection Device is specifically designed to protect against:

- Sudden high-voltage electrical spikes
- Transient electrical surges
- Lightning-induced surge voltages
- Switching surges
- Short-duration voltage impulses that may damage electronic equipment

An SPD reacts to transient over-voltage by diverting surge energy away from connected equipment and helping limit the voltage reaching the protected electrical system.

Important: SPD Is a Surge Protection Device

An SPD is **not a complete electrical protection system**.

It is primarily intended for protection against **short-duration electrical spikes and transient surges**.

A stand-alone SPD does **not provide** protection against:

- Sustained high voltage
- Sustained low voltage
- Overload
- Normal short-circuit conditions
- Earth leakage
- Human electric shock
- Neutral failure
- Over-temperature
- Power-consumption monitoring
- Remote monitoring

Customers requiring these additional protections should consider the **Cosmic Electrical Protection Device (CEPD)** or the advanced **Cosmic Smart Electrical Protection & Monitoring System (CSEPMS)**.

Why Proper Earthing Is Extremely Important

An SPD requires a properly designed electrical installation and an effective earthing system to perform correctly.

During a surge event, the SPD must provide a safe, low-impedance path for surge energy.

Therefore:

Proper Earthing + Correct Protective Device Coordination + Correct SPD Installation = Effective Surge Protection

Poor or inadequate earthing can significantly reduce the effectiveness of surge protection.

Installation should always be carried out by a qualified electrician according to the electrical system, selected SPD specifications and applicable installation requirements.

Coordinated Three-Level Surge Protection

For valuable installations and sensitive equipment, a **coordinated multi-stage surge protection system** provides stronger protection than relying on only one SPD.

Level 1 — Main Incoming Supply

A suitable **Type 1 / Type 1+2 SPD** can be installed at the service entrance or main distribution point.

Purpose:

To handle high-energy incoming surges and lightning-related surge currents before they travel deeper into the installation.

Level 2 — Distribution Board

A suitable **Type 2 SPD** is installed at downstream distribution boards.

Purpose:

To further reduce residual surge voltage and protect the electrical circuits supplied by that distribution board.

Level 3 — Near Sensitive Equipment

A suitable **Type 3 / fine-protection SPD** may be installed close to particularly sensitive equipment.

Suitable Equipment:

- Computers
- Servers
- Networking equipment
- Medical electronics
- Laboratory instruments
- PLCs
- CNC machines
- Automation controllers
- Communication systems
- Security systems

- Audio/video equipment
- Smart appliances
- Electronic control boards

This staged approach creates multiple levels of defence between the incoming electrical supply and sensitive equipment.

Replaceable SPD Cartridge

Cosmic SPD solutions can use **replaceable surge-protection cartridges**.

Surge-protection elements absorb or divert substantial surge energy during severe electrical events. Over time, or following significant surge events, the protection cartridge may reach the end of its useful life.

Instead of replacing the complete unit, the affected cartridge can be replaced where the selected model supports replaceable cartridges.

Customer Advantages

- Easy maintenance
- Faster restoration of surge protection
- Lower replacement cost
- Reduced service time
- No need to replace the complete protection assembly
- Convenient preventive maintenance

The SPD condition/status should be periodically inspected, particularly after severe lightning or surge events.

How Cosmic SPD Helps Customers

1. Helps Protect Valuable Electronics

Modern appliances contain sensitive electronic PCBs, processors, displays and control circuits.

An SPD helps reduce the surge voltage reaching these components.

2. Helps Reduce Unexpected Equipment Damage

Surge damage can result in sudden equipment failure or gradual degradation of electronic components.

Surge protection adds an important defensive layer to the electrical installation.

3. Helps Reduce Repair and Replacement Expenses

Repairing electronic boards, control cards, appliances and industrial electronics can be expensive.

A relatively economical SPD installation can help protect equipment that is worth many times the cost of the protection device.

4. Helps Improve Equipment Availability

Equipment damaged by a surge can remain unavailable until parts are repaired or replaced.

Surge protection can help reduce surge-related downtime.

5. Simple and Economical Protection

For customers who mainly require protection against electrical spikes and transient surges, SPD provides a cost-effective solution without the cost of a complete intelligent protection system.

6. Suitable for New and Existing Installations

Cosmic SPDs can be considered for:

- New electrical installations
- Existing distribution panels
- Equipment protection panels
- Electrical retrofits
- Residential upgrades
- Industrial electrical panels

Final suitability and installation should be verified by a qualified electrician.

Applications

Residential

- Individual homes
- Apartments
- Villas
- Residential complexes

Helps protect:

TVs, refrigerators, air conditioners, washing machines, computers, routers, home automation and other electronic appliances.

Commercial

- Shops
- Offices
- Showrooms
- Retail outlets
- Restaurants
- Hotels

Helps protect:

Computers, POS systems, CCTV, networking equipment, lighting controls and commercial appliances.

Hospitals & Healthcare

- Hospitals
- Clinics
- Diagnostic centres
- Laboratories

Helps provide an additional surge-protection layer for sensitive electronic and medical-support equipment.

IT & Communication

- Server rooms
- Data/communication rooms
- Network centres
- IT offices
- Telecom equipment

Helps protect sensitive electronic systems from damaging transient voltages.

Industrial

- Factories
- Manufacturing units
- Automation panels
- Control systems
- PLC panels
- CNC machines
- Instrumentation systems

Helps reduce surge-related damage to electronic control and automation equipment.

Educational Institutions

- Schools
- Colleges
- Training centres
- Computer laboratories

Helps protect computers, networking equipment, projectors and electronic teaching infrastructure.

Why Choose Cosmic SPD?

Simple

Dedicated protection against high-voltage surges and electrical spikes.

Economical

An affordable entry-level electrical protection solution.

Replaceable Protection

Replaceable cartridge design can reduce maintenance cost.

Single & Three Phase

Solutions for residential, commercial and industrial installations.

Scalable

Can be used as part of a coordinated multi-stage surge-protection system.

Who Should Choose This Product?

Cosmic SPD is ideal for customers who say:

“I need an economical solution mainly for electrical surge and spike protection.”

For customers requiring **earth-leakage, shock, sustained high-voltage, overload, short-circuit, neutral-failure and surge protection together**, Cosmic recommends upgrading to the **Cosmic Electrical Protection Device (CEPD)**.

Cosmic Protection Philosophy

Protect the Installation.

Protect the Equipment.

Reduce Unexpected Loss.

Cosmic SPD Type 1 & Type 2 — Essential Surge Defence for Modern Electrical Systems.

Website CTA

Need help selecting the correct SPD for your installation?

Contact Cosmic for a site assessment and the appropriate single-phase or three-phase surge-protection solution.

*Product configuration and specifications may vary according to model and application.
Proper MCB/protective-device coordination and effective earthing are essential.
Installation must be performed by qualified electrical personnel.*