

POOL & SPA

What's the best way to protect expensive pool equipment from power surges?

Hint: Not with GFCI

You may not know it but power surges are unavoidable and frequent. Even a single incident can damage your expensive pool equipment. However, contrary to popular belief, power surge events can't be controlled with Ground Fault Circuit Interrupters (GFCI).

An informal survey of pool owners revealed this common misconception. Despite the advanced (and expensive) technology used in pool and spa equipment design, many pool owners think GFCI receptacles or breakers installed in the electrical panel provide sufficient protection from surge events.

A power surge (sometimes referred to as an electrical surge or voltage spike) is a sudden increase in current in an electrical circuit. Though they last only a millionth of a second, they can affect an entire electrical system, causing damage to connected appliances and devices, as well as hardwired components.

Though commonly associated with thunderstorms and weather conditions, electrical surges are triggered in many different ways. Approximately 60 to 80 percent of surge events are created just by the normal operation of electrical devices switching on and off. Examples of home appliances and equipment that can cause switching surges are

air conditioners, heat pumps, electric clothes dryers and refrigerators. Whether from a high-impact instance or through repeated, low-level surges, these voltage spikes are the silent killers responsible for degrading and eroding components in valuable electronic equipment.

So, what's the best way to protect pool and spa equipment from the dangers of power surge? Whereas a GFCI is designed to shut down power to an electrical circuit when it detects that current is flowing along an unintended path, such as through water, a surge protective device (SPD) is specifically designed to protect electrical systems by diverting or suppressing surges before they can travel further. This prevents overheating or other damage to electrical equipment.

A surge protective device can be installed on the pool's electrical supply panel or spa disconnect to protect electrical equipment from surges, including:

- Gas and electric high-efficiency heaters
- Single and variable speed pool pumps
- Pool automation systems
- Water feature pumps

- Electronic valve actuators
- Chlorinators
- Variable speed pumps
- Portable hot tubs

With a typical installation time of 10 minutes onto a pool sub-panel, the main electrical service panel, junction box or spa disconnect, adding an SPD is an inexpensive and convenient "insurance policy" for the pool and spa owner. Intermatic offers the PS3000 Surge Protective Device which includes a 3-year, \$7,500 connected equipment warranty. This device uses state-of-the-art Thermally Protected Metal Oxide Varistor (TPMOV®) surge protection technology to eliminate the potentially hazardous failure modes commonly associated with standard MOV technology. A green LED indicator light is constantly lit while the unit is in operation. When the red LED light turns on this indicates the SPD protection has been diminished and requires replacement.

The PS3000 Surge Protective Device is a simple and cost-effective investment that ensures non-stop pool season fun. Find the PS3000 and other pool and spa controls and solutions at www.intermatic.com.

