



**The Premier Solution to Safeguard Gaming Equipment  
and your Profitability.**

*Engineered with SurgeX protection technology*

PowerPro offers a full range of intelligent products to safeguard gaming systems from the dangers of power disturbances.

*Professional grade power protection safeguards slot uptime and protects slot equipment from malfunctions and unnecessary parts replacements.*

Slot machines are one of the key revenue producing devices in the gaming industry and uptime and performance are critical to the operation and customer experience. Since the conversion of these devices from electromechanical to electronic, slot machines are subject to machine malfunctions and lock-ups due to fluctuations in power which occur all the time. The SurgeX PowerPro will eliminate the most common electrical issues such as surges, spikes and noise that affect the microprocessors inside the machines. The result is more continuous play, higher customer satisfaction, and less service problems, which in turn, means lower labor and parts cost and increased slot revenue.

SurgeX PowerPro offers a full range of intelligent products that are ideally suited to protect gaming machines from the adverse effects of power fluctuations. Our products provide professional-grade protection from power disturbances on data and power lines that can degrade machine performance, render equipment inoperable, and compromise the profitability of your business.

Only SurgeX PowerPro ensures the highest level of protection against destructive spikes, surges, and inductive transients than can cause disruptions, downtime, and catastrophic damage. Our innovative product line offers Cloud Remote Access and real time IP command line interface control solutions that enable you to diagnose gaming equipment intelligently and reboot power remotely.

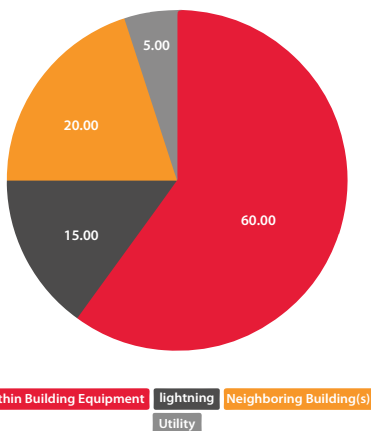
### Why do slot Machines Need Power Protection?

- **Uptime is imperative:** Slot downtime is expensive to casinos and causes reduced win and customer dissatisfaction.
- **Today's slot machines are more sensitive:** The fact is today's slot machines and electronic games are very sophisticated because they contain more components (LCD monitors, boards, card readers) and are reliant on on microprocessors to function.
- **Power disturbances can cause slot malfunctions and downtime:** Equipment in an average business experiences some type of power anomaly 40 to 50 times per month<sup>1</sup> and it's likely to be higher within casinos. Most power disturbances are caused by nearby equipment<sup>1</sup> within a casino (not lightning and dirty utility power), but they are hidden and commonly misunderstood. Nearby equipment connected to the same power source within a building (such as elevators, HVAC systems) cause the majority (80%) of surges and spikes that can reduce the longevity of components in nearby slot machines. Due to the significant amount of electrical equipment inside a casino, the gaming industry is particularly vulnerable. While these power disturbances often go unseen, the slot disturbances, errors, malfunctions, unnecessary replacement parts, and downtime they cause impact the profitability of slot equipment.

Most people are aware that electronic equipment can be damaged or destroyed by a lightning strike because it is the most devastating example of a power disturbance. What they don't realize is that lightning only accounts for about five percent of all disturbances, whereas 80 percent originate from within buildings<sup>1</sup>, and that surges account for 56 percent<sup>3</sup> of all power disturbances<sup>2</sup>. These internal transients are random in nature and may last only tens of nanoseconds. They hit equipment with less than catastrophic voltage levels so you may not even be aware they're happening - even though they may occur many times each day. The damage may not happen immediately or be outwardly evident, but over time your gaming equipment will fail as the sensitive components are continually degraded.

- **Power protection and conditioning devices are the most important factors to increase the performance, reliability and longevity of any type of electronic equipment, especially slot machines:** When considering power protection and energy intelligence in a gaming environment, it is most important to utilize technology that has a proven record of safeguarding the functionality and performance of valuable electronic equipment and systems from disturbances.

SOURCES OF POWER QUALITY DISTURBANCES



\*Source: Florida Powe Study, 1933

## A UPS (Uninterruptable power supply) is not enough

UPS equipment and surge strips are commonly used on slot banks to provide back up power, but they don't provide 100% protection from power disturbances

- Management teams and facility personnel have long understood that power outages represent a problem to equipment performance, profitability, and customer satisfaction. This is only due to the fact that they can actually see the effects of an outage. This is why they commonly use UPS equipment to provide backup power.
- A UPS provides back up power and only protects slot equipment from power outages and brownouts, and it is not designed to provide system wide power protection. Surges, spikes, transients and electronic noise can disable a UPS pass through to connected equipment. Even if a UPS advertises it has surge and noise protection, it is minimal and only provided to protect the UPS itself, not the connected equipment. This is why the leading UPS manufacturers (APC, Eaton, Emerson) recommend that a UPS be protected by a surge protection device<sup>3</sup> to ensure the UPS and the connected equipment is properly protected from all electrical disturbances. In addition, the Institute of Electrical and Electronics Engineers (IEEE) recommends surge protection devices be used with a UPS.
- Because UPS equipment is not built to withstand repeated surge and noise events, if unprotected the UPS itself is also vulnerable to disruption. Most power disturbances (surges and spikes) can cause UPS malfunctions, UPS component damage, and downtime. In addition, power disturbances also cause UPS batteries to degrade faster and have a reduced life. Many casinos replace costly UPS equipment and batteries often, which can be reduced if they use proper power protection, such as the Suzo-Happ Power Pro.

### Surge strips also provide limited protection

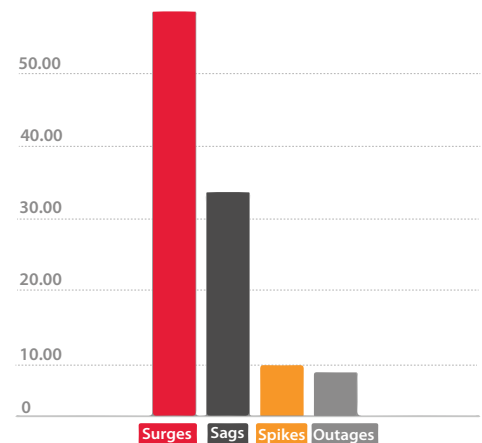
- Most surge strips use minimal protection (1 or 2 MOVs/metal oxide varistors), are not robust enough, and do not have adequate intelligence to protect commercial equipment. The internal components inside a common surge strip can fail and within a couple of surge events, they can become damaged – and will no longer protect your slot machines properly.
- After a couple of surge events, a surge strip will stop protecting connected equipment. Even if the light is green on the strip, that does not mean the components inside are still working.
- Surge strips are merely power outlets/power distribution. They do not provide professional grade surge protection strong enough to protect the life of a sophisticated slot machine.

SurgeX power protection provides redundancy to ensure both the slot machines and the UPS equipment are not impacted by power disturbances.

### Surges Can be Caused by:

- HVAC and Lighting systems
- Tripped power circuits due to overloading
- Applications and other electronic equipment
- Power fluctuations
- Surges originating from outside the building
- Lightning strikes<sup>3</sup>

TYPES OF POWER QUALITY DISTURBANCES



\*Source: EPRI, 1994

## Why SurgeX? What does the Suzo-Happ Power Pro provide?

SurgeX has provided professional grade protection to help businesses improve uptime in multiple industries, for over 30 years.

- SurgeX has a proven ROI for protecting critical electronic equipment in other industries. Mission critical environments such as the Dallas Cowboys stadium, Library of Congress, Carnegie Hall, and the Hubble Space Telescope Center all use SurgeX power protection to ensure their Audio Video systems, IT equipment, and electronic equipment does not experience power related downtime.

Suzo-Happ recognized the need in the market, and partnered with SurgeX to offer professional grade protection to our casino customers

- Suzo-Happ now sells the “Power Pro” and the “Remote Portal” which feature professional grade protection, diagnostics, and remote power management/cycling technology.










A large casino tested SurgeX’s technology, which proved power disturbances are common, and found significant value in the Suzo-Happ Power Pro.

- We recently put our equipment to the test in a large, well respected casino. We fitted 20 slot machines and UPSs in a single casino with the Suzo-Happ Power Pro over a four week period. During this period our devices, which include diagnostic intelligence, recorded 50 power disturbances hitting these machines. These issues included surges, under-voltage, voltage starvation and outages which can effect equipment performance, parts replacement costs, service calls, machine downtime, and casino profitability.
- The study showed that our power protection devices could save a minimum of \$100 per slot machine, per month, plus an additional annual savings of up to \$40 per UPS. They also saw considerably better uptime and performance from their UPS devices. While this single study does not guarantee the exact results, it is in line with studies in other industries, and represents a significant savings opportunity to increase uptime and profitability.

*To safeguard business continuity, adequate power protection for [machines] and IT equipment is critical<sup>3</sup>*

### Sources:

- Florida Power Study
- EPRI
- Manufacturer White Papers: The Seven Tyes of Power Problems, UPS abd tge Need for Secondary Surge Supression, Surge Protection Devices and Uninterruptible Power Supplies, IT Protection

	Model Number	Plug Configuration		Description
		Input	Output	
	80-0311-00	 NEMA 5-20P	 (1x) NEMA 5-20R  (2x) NEMA 5-15R	PowerPro Power Conditioner with Integrated Scope Meter, 120V/20A 1 pigtail + 2 receptacles, diagnostic software and interface cord included
	80-0310-00	 NEMA 5-15P	 (3x) NEMA 5-15R	PowerPro Power Conditioner with Integrated Scope Meter, 120V/15A 1 pigtail + 2 receptacles, diagnostic software and interface cord included
	80-0474-00	5V, 500mA, USB Mini	(1) RJ45 Server Port	Remote Portal IP Enabled Communications Accessory, RJ25 6p6c standard pinout
	80-0487-00	12V, 1A, Barrel	(5) RJ45 Server Ports	Remote Portal IP Enabled Communications Accessory, 5 Port Gigabit Network Switch, RJ25 6p6c standard pinout
	80-0487-10			1 PowerPro interface cord