



## Data Center Protection

### Implementing Reliable Surge Protection in Data Centers

Ensure unparalleled reliability and availability of your mission-critical infrastructure with Strikesorb® Surge Protective Devices, a protection technology proven in data centers of major IT, telecommunication and banking companies worldwide for more than 10 years.



In today's world, data centers are the critical information processing nodes that keep our highly connected business and personal lives moving. Preventing downtime periods is crucial to IT infrastructure operators. However, a research

brief by the Aberdeen Group reports that surveyed companies experience significant financial losses due to downtime – more than \$180,000 per hour – representing hundreds of millions of dollars in lost revenues in total each year.<sup>1</sup>

#### The Challenge

One of the key failure sources at data centers is voltage transients. The critical functions of data centers must be safe guarded from power surges caused by unreliable “dirty” power off the grid or by direct and indirect lightning strikes. Transient power surges generated within data centers by motors, generators and other electrical equipment are also a major concern and source of equipment damage and revenue loss.

Data center operators understand that very frequent overvoltage events and inadequate protection of mission-critical equipment such as control electronics, HVAC systems, power generation and distribution, lead to major system failures and downtime.

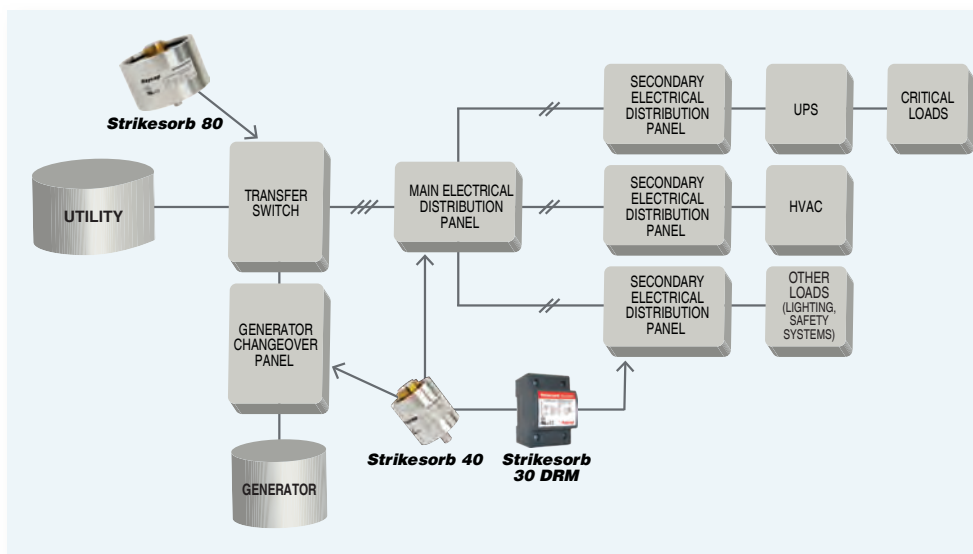


Figure 1: Recommended scheme for protection of critical systems

1. Aberdeen Group Research Brief; "Datacenter Downtime: How Much Does It Really Cost?"; March 2012.





### Solution

The significant financial losses caused by overvoltage events can be minimized by using appropriate industrial surge protection solutions featuring Strikesorb Surge Protective Devices (SPDs). Strikesorb is designed using high-grade metal oxide varistor (MOV) technology sealed inside a strong aluminum casing. The aluminum housing acts as a heat sink, dissipating the heat and energy, and ensuring

the SPD will not catch fire or explode. With their unique design, maintenance-free Strikesorb modules have the capability to withstand multiple high-energy transients – including direct lightning surges – and continue to keep protected equipment safe. At new data centers Strikesorb SPD modules conveniently integrate directly onto busbars in electrical distribution panels as shown in Figure 2. For existing infrastructure, Rayvoss

enclosures featuring Strikesorb are easily installed close to the electrical distribution panels to upgrade equipment protection levels as shown in Figure 3.

### Conclusion

Raycap solutions, featuring Strikesorb SPDs, are the ideal way to protect critical equipment from catastrophic failure and ensure the reliability and availability of data center functions.

“ When Strikesorb technology was first introduced in Ireland, data center operators frequently experienced issues with conventional SPD technologies. They quickly recognized the benefits of Strikesorb modules: First they are extremely robust and reliable because they suffer no performance degradation over time. Second, they are fully safe which is crucial because catastrophic failure is not tolerable. Now Strikesorb modules protect most data farms in Ireland. I can say Raycap’s product excellence was critical in our company gaining and retaining business with the largest IT firms in the world operating data centers in Ireland. ”

Mr. Seamus Butler  
Managing Director  
ACS Drives and Control Systems Ltd  
Republic of Ireland



Figure 2: Strikesorb 40 modules integrated on a busbar inside a power distribution panel



Figure 3: A Rayvoss system installed outside a power distribution panel

### Strikesorb Benefits

- Maintenance-free operation
- Safe operation: No smoke, fire or explosion
- Unique capability to withstand multiple high-energy transients
- Low let-through voltage, therefore providing excellent protection compared with competitive SPD products
- Class I/Class II compliant SPD per IEC 61643-11
- Global standards compliance: UL 1449 5<sup>th</sup> Edition, IEC, IEEE, NEMA
- 10 year global product warranty

**Raycap is a trusted partner, providing maintenance-free electrical protection solutions for mission-critical applications in hundreds of thousand installations worldwide. For a detailed presentation on how Raycap’s Strikesorb-based solutions can protect your data center operations, contact us today!**



[www.raycap.com](http://www.raycap.com)

