

Voltage Protection Product Range Comparison Chart

The Automatic Voltage Switcher Range

Prevents damage to equipment from over or under voltage levels of long duration. Works by disconnecting power when voltage level exceeds set parameters. Reconnects again when power returns inside parameters for a pre-set period. Fully automatic operation. All switchers include other protection features.

	HiVoltGuard	TVGuard	FridgeGuard	VoltGuard	LightningGuard	Automatic Voltage Switcher AVS13/15	Automatic Voltage Switcher AVS30		
 Low Voltage			✓	✓		✓	✓		
 High Voltage	✓	✓		✓	✓	✓	✓		
 RFI / Noise						✓ (AVS13RL only)			
 Spikes/Surges	✓	✓	✓	✓	✓	✓	✓		
 Basic Lightning	✓	✓	✓	✓	✓	✓	✓		
 Power Cuts									
 Power-Back Surges	✓	✓	✓	✓	✓	✓	✓		
 Telecom Surges									
Amps	5	5	5	7	5	13/15	30		
Single phase					✓				
Three phase									
Connect by	Plug/socket	Plug/socket	Plug/socket	Plug/socket	Plug/socket + data	Plug/socket	Direct wiring		
Suitable for	TV VCR HiFi radio etc	TV LCD/Plasma screens VCR HiFi Fax machines etc	Fridge Freezer Cooler etc	TV VCR HiFi Radio Fridge Freezer etc	Telecoms equipment internet Broadband PC modem data etc	Any electrical or electronic equipment (incl.air con)	Any electrical or electronic equipment (incl.air con)		

Spikes/Surge: Very short, (one millisecond) event of very high surge in voltage to thousands of volts and amps. Spikes are common in all parts of the world and repeated exposure to spikes will damage electronic equipment and corrupt data.
What causes it? Switching on/off of nearby equipment, lightning, motors starting etc.



Power-cuts: Common in every country in the world, especially in areas of frequent voltage problems. Sudden loss of power can cause damage ranging from corruption of data to mechanical faults as equipment is stopped while in operation.
What causes it? Power or sub station failure, breakdown in the distribution network, or simply a plug being pulled out accidentally.



RFI (Radio Frequency Interference) / Noise: High frequency disturbances that occur within a short period of time (milliseconds). RFI & noise are very common in all parts of the world and are the main cause of data corruption.
What causes it? Generated by high frequency noise from nearby equipment like TV, radio equipment, transmitters, mobile phones, switching on/off of certain loads, fluorescent lights, motor speed controls, light dimmers.



Power-Back Surges: These typically occur when power returns after a power-cut and connected equipment receives a surge of electricity at an over-voltage level, which can be very damaging (see above).
What causes it? Power back surges are created by the utility, when it restores supply at an above normal voltage in order to compensate for the demand as connected equipment re-starts simultaneously.



Over-Voltage: Long duration (milliseconds, seconds, minutes, hours or days) rise in the voltage above acceptable limits.
What causes it? On return of mains supply after power cuts, under-sized utility oscillating between periods of brown-outs and over-voltage or accidental (e.g. accidental connection between two phases).



Telecom surges, spikes and lightning: Short term, high voltage and current phenomena occurring on the telephone lines. Can cause irreparable damage to any piece of equipment connected to the incoming line. The telephone line itself may even be damaged or destroyed in severe cases.
What causes it? Telecom spikes are caused by lightning striking either the telephone line directly or an object near it.



Brown-Out/Under-Voltage: Long duration of low voltage (milliseconds to seconds, minutes, hours or days).
What causes it? Most commonly an over-stretched utility, especially in areas of poor power distribution infrastructure and remote areas. Common in dry seasons where water is used for electricity generation.



Lightning: Direct or nearby strikes can cause minor problems or severe disturbances and damage. Lightning produces spikes/surges, over-voltage or power cuts.
What causes it? The surge is generated by either a direct hit, or indirectly striking underground or overhead lines and transmitting high surges to connected equipment in nearby buildings.

