

HOW MUCH UPS CAPACITY (WATTAGE) DO I NEED?

Related Products

UPS SYSTEMS

Article Number

000117

Estimating Capacity Requirements:

A UPS system can only support a limited amount of connected equipment when operating from battery before it becomes overloaded. You can estimate your UPS capacity requirement by totaling the wattage requirements of all the equipment you plan to connect to the UPS system. You should refer to the equipment manufacturer's documentation to find the wattage. If you can't find any printed or online documentation, refer to the equipment nameplate. If your equipment lists its power requirements in amps, multiply the number of amps by the AC voltage to estimate wattage. Refer to the UPS system's specifications to find models with capacities higher than your total wattage requirement. UPS systems are typically categorized by their VA rating, but wattage capacity should also be listed. Keep in mind that UPS manufacturers typically recommend limiting IT equipment loads to 80% of capacity to provide headroom for handling inrush current demands at startup.

Note: Although this method will provide a rough estimate of your UPS capacity requirements, we recommend that you confirm your estimate with the UPS vendor.

High-Capacity Applications:

If your capacity requirement exceeds 16,000 watts, you may wish to consider a 3-phase UPS system, or you can divide your equipment into smaller groups to be supported by multiple single-phase UPS systems. If your equipment is distributed across a wide area, multiple single-phase UPS systems may be required. 3-phase power costs more to install than single-phase power, but it can be more efficient for high-capacity loads.

High Power Factor:

Some UPS Systems have a high power factor (≥ 0.8) that makes more efficient use of your facility's power infrastructure and available space, allowing you to connect more equipment to each UPS system and circuit. While a 10,000 VA UPS system with a 0.7 power factor will support a 7,000-watt load, a 10,000 VA UPS system with a 0.9 power factor will support a 9,000-watt load, an increase of 2,000 watts without a corresponding increase in circuit requirements.