

INVERTERS for Dummies

Need for Emergency Systems

Public buildings carry any size electrical load. Daily lighting needs use a lot of electricity. Normally, the power or “utility” is there to supply the electrical needs. In emergency situations, the power could be lost. These situations could include a power outage, fire, or power fluctuations, all resulting in leaving people in the dark. In these situations, electrical back-up systems are needed. These systems, aka **INVERTERS**, automatically monitor the incoming utility to the building and react when the situation of lost power occurs. They will supply electricity to the lighting and power loads, required by the National Electrical Code and the Life Safety Code’s requirements for exiting the building (egress).

How Do Emergency Systems Work?

Standard electrical systems run on AC power. Emergency lighting loads also run on AC power, usually as “normally-on” or “normally-off” lighting. On occasion, back-up will be needed for a mix of both on and off lighting. Inverter systems are made up of a set of DC batteries and electronics that can convert the DC power from the batteries into an AC power source needed for the emergency lighting loads. While normal AC power or utility is present, the inverter is in the standby mode. During standby, the batteries are being charged as needed and AC power is supplied through the inverter from the utility to power the emergency lighting loads that are normally on. Emergency inverter systems will provide at least the code required 90 minutes of egress lighting. In some cases, less or more time could be allowed or required. This is generally plenty of time for the building occupants to evacuate the site, if necessary.

Why Use Emergency Inverter Systems?

Simply put... Today’s technology is far superior electrically, and they work the BEST for their intended purpose. Whether it be a loss of power due to storms, an electrical line issue, of a true emergency loss of power, inverters sit quietly on guard, ready to light the way to safety for the public. Of the alternatives, inverters are the greenest choice for emergency lighting. There is no exhaust from fossil fueled engines, and the batteries are minimal when compared to the dozens to hundreds of emergency wall packs they replace.

- Inverters are GREEN.
- Inverters can automatically test themselves.
- Inverters are centrally located in one area for total UL and code compliance.
- Inverters allow the owners of the building to use their interior design of choice, blending it in architecturally, rather than being installed as unattractive lighting.
- Inverters can be installed practically anywhere inside of the buildings.
- Inverters are the choice for the future.