

PHD NEWS

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THIS WEEKS TOP

STORIES

- > **Selecting the correct UPS system**
- > **UPS Topologies**
- > **PHD's UPS systems**

TOPICS FOR NEXT WEEK

- > **Surge Suppression**
- > **Power Quality Problems**
- > **PHD's Featured product**
- > **Any Questions**

The Live WIRE




UPS System Selection

Many consumers make fundamental errors when specifying UPS systems, which often result in costly long term consequences. Incorrect selection of a UPS can seriously impact on the daily running of your business, and as we are all too well aware, in this economic climate every cent counts.

Below is a list of rules that have assisted me over the years. I am sure they will assist you in making the best selection when next acquiring a UPS system
By Anthony van Wijk



T3 - PHD Online UPS

RULES

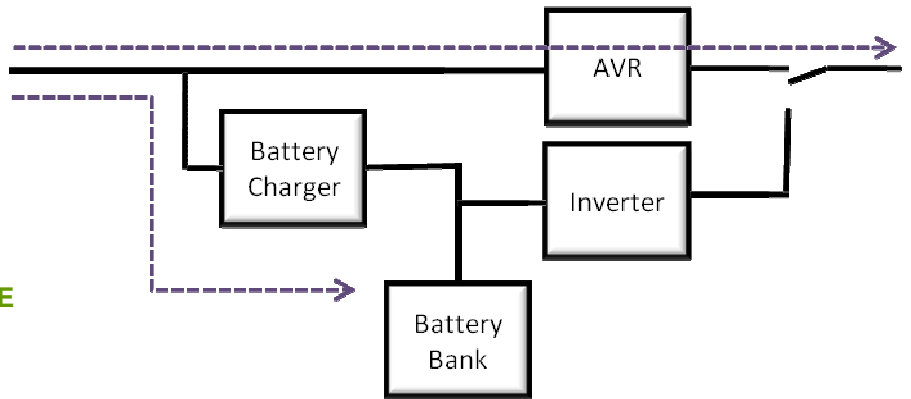
1. Use a UPS and **not** an inverter for sensitive load, as an inverter offers very little protection
2. Check the name plates to establish the power rating for the equipment on which the UPS is to be installed, as a rule of thumb a standard PC is about 350Va, but don't guess, it could be costly.
3. Amps X Volts = Watts, Watts ÷ PF = VA
4. If you are installing UPS systems onto servers, or any PC where sensitive, mission-critical data is stored **DON'T COMPROMISE** always use an online UPS
5. Never overload a UPS system, loads in excess of about 80% of the UPS rated capacity, could result in poor performance or even total failure under no power conditions.
6. Only True on-line UPS systems are capable of effectively filtering generator or poor mains supply. It is wise to test the power quality prior to specifying the type of UPS for the application

UPS Topologies

LINE INTERACTIVE MODIFIED SINEWAVE

Low to medium levels of protection
for your equipment
Relatively inexpensive
Sizes - 500Va - 1000Va
Considered entry level units
Most commonly used for PC back-up
Not Suitable for generators

Operational diagram of a line interactive UPS



▲ Under normal conditions the power bypasses the battery charger/inverter circuit of the UPS system. The AVR offers basic protection from voltage irregularities. Average switching time 2ms—8ms.

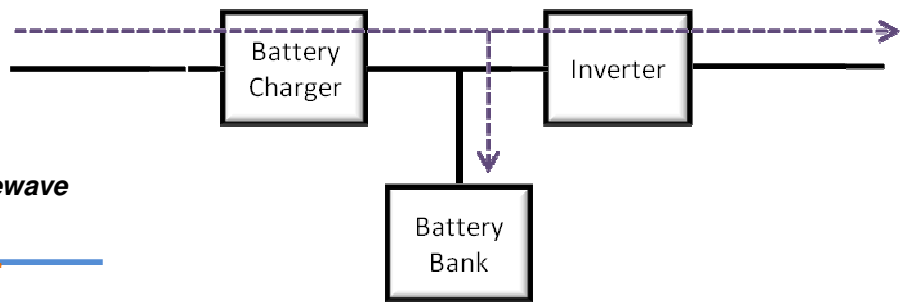
LINE INTERACTIVE PURE SINEWAVE

Medium levels of protection
for your equipment
Sizes - 1000Va - 3000Va
Considered industry standard
Can be used as a long runtime unit
Tower or rack mounted form
Not Suitable for generators

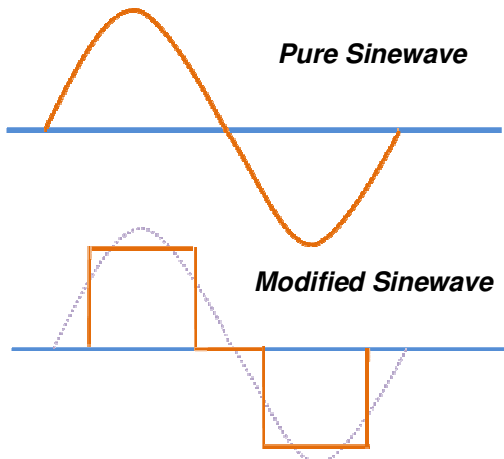
ONLINE DOUBLE CONVERSION

High levels of protection
for your equipment
Sizes - 1000Va - 3.6MVA
Considered Up market
Used for general AC Back-up and protection
Can be used as a long runtime unit
Tower or rack mounted form
Only option Suitable for generators

Operational diagram of a Double conversion online UPS System



▲ the load is running off the inverter and the batteries. In an online topology there is no switch.



PHD's UPS Systems

K,T1,T2 - Line Interactive UPS Systems

600 Va - 3 KVA

Modified and Pure Sinewave

T3,T3R - Double conversion online UPS systems 1KVA-3KVA

Rack Mountable or tower

T3 - Double conversion online UPS systems 6KVA & 10KVA

Single phase

Parallel able standard

RS232 standard, SNMP optional

T4 - Double conversion online UPS systems 10KVA & 20KVA

Three phase in - Single phase out

Parallel able standard

RS232 standard, SNMP optional

T5 - Double conversion online UPS systems 10KVA - 400KVA

Three phase in - Three Phase out

Parallel able Optional

SNMP Standard

Inverter systems with chargers

Pure sinewave

Modified Sinewave

Home back-up wall mounted systems

Generator systems

We engineer any size system



T1 - Line interactive UPS system

T2 - Line interactive UPS system



T3R - Rack mountable UPS system



T3 - Online 1 in, 1 out UPS system

T4 - Online 3 in, 1 out UPS system



T5 - Online 3 in, 3 out UPS system



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NEXT WEEK

Any Questions

If you have any power related questions that need answering, please feel free to send them to us