GLOSSARY OF TERMS

GENERAL

Ambient temperature range
The specified temperature range, within which the device is designed to operate
Efficiency
The ratio of output power to input power expressed as a percentage
Power de-rating
The required reduction in output power of a device where the specified ambient temperature range is exceeded
Power factor: cos-phi
The ratio of real power to apparent power due to the non sinusoidal shape of the input current

TRANSFORMERS

VA, kVA and MVA power ratings
The combination of output voltage and output current is the VA rating. Where multiple outputs occur the overall VA rating is the total VA of all the output windings, kVA is kilovolt amperes. 1kVA is 1,000VA and 1MVA is 1,000KVA.
Double wound transformer or isolation transformer
A transformer with at least two windings, providing isolation between the input and output circuits
Auto transformer
A single winding transformer with no isolation between input and output circuits. These transformers can be used where input and output voltages are very close and space is at a premium.
Input voltage(s)
The supply voltage to the transformer
Output voltage(s)
The output or load voltage(s) from the transformer
Off load and full load
Off load is the where the input to the transformer is powered but no load is being taken. Full load is where the full rated power of the transformer is being taken.
Insulation class (from Classification of Insulating Materials)
Class Y: 90 deg C rating
Class A: 105 deg C rating
Class E: 120 deg C rating
Class B: 130 deg C rating
Class F: 155 deg C rating
Class H: 180 deg C rating
Class C: above 180 deg C rating
Class I and Class II transformers
Class I : A transformer in which protection against electric shock does not rely on insulation only, but where provision for earthing is provided and required.
Class II: A transformer in which protection against electric shock does not rely on basic insulation only, but where double or reinforced insulation is provided. There is no provision for earthing.

POWER SUPPLIES

Transformer rectifier
A combination of conventional transformer and rectifier to convert AC to DC
Switched mode power supply
A power supply that switches the power to a high frequency to reduce size and weight. AC-DC takes AC power and converts it to DC power. DC-DC takes DC power of one voltage and converts it to DC power of another voltage.

RFI FILTERS

EMC
Electro magnetic compatibility
RFI
Radio frequency interference
Residential standard and industrial standard
Residential standard to EN 50081-1, industrial standard to EN 50081-2