

Soft start

The application of the input power permits the unit to generate an AC output. The output power increases linearly until it reaches its calibrated value. This delay from initial output generation until the nominal value is defined as the soft start.

No load operation

Inverters require no minimum load for operation within tolerance.

Short circuit protection

The inverter current limitation circuit provides a protection against an external short circuit. Due to the need for crest factor and pulse power requirement in many applications, the current limitation permits twice the nominal output current to be extracted for up to 1 second. The current limitation will then be reduced to typically 105% of the nominal value. Should the overloading persist, and the output voltage reduce to less than 20% of nominal, then the unit will perceive an overload condition and turn off. Recycling the input voltage will remove this latched off condition.

Crest factor

The ability of an inverter to deliver to a load an inrush current is related to the crest factor. The crest factor is the ratio between the nominal and the peak current.

Over voltage protection (OVP)

The high power units have this feature. It will shut down the primary power circuit after a continued OVP operation. For removing this shut down, the input power must be re-cycled. The output voltage is measured internally. This measured value is compared against a reference value. When the reference value has been reached, this circuit turns off the power circuit. Once the measured value has reduced below the reference value the power circuit is once again permitted to be activated.

Sense leads

Sense leads are internally connected in all standard configurations.

Harmonic distortion

The generated inverter output is designed to follow a true sine wave signal. Deviation from this sine wave is measured as distortion. The level of deviation is defined as harmonic distortion. The total harmonic distortion THD is the relationship between the harmonic and fundamental wave forms.

Surge power

The AC output may facilitate the output load through its ability to provide more than the nominal current for up to 1 second.

Power factor

The AC output may facilitate complex or other loads, through its ability to provide a phase shifted output current at nominal power rating. This is once again due to the ability to provide more than the nominal output current for a limited period of time.