DIMENSIONS®

WAVEFORMS EXPLAINED

WHAT DOES YOUR AC VOLTAGE LOOK LIKE?

Every device with a three-pronged plug is engineered to operate from a pure sine wave, utility-grade power source. Industrial users that require AC power in mobile applications utilize power inverters to change the Direct Current (DC) energy from the vehicle batteries to Alternating Current (AC). As with all commercial products, power inverters are available in a wide variety of price and quality levels.



Modified Sine Wave Inverters

Modified sine wave inverters are a cost effective choice to run appliances and equipment that is less sensitive to power fluctuations, such as lights and some tools. Modified sine wave inverters simulate AC power inverted from DC batteries. In most cases, applications like motors, pumps, and heaters are only mildly inefficient using this type of power. Other loads that charge batteries, produce audio and video, or operate computers or processors will not operate properly, or may be damaged on this waveform as the power supply cannot adequately filter the improper AC voltage. Check UL listings when purchasing a modified sine wave inverter as they often do not have UL listings because the output is altered by wave shape distortion called Total Harmonic Distortion (THD).

Pure Sine Wave Inverters

Pure sine wave inverters produce the equivalent to utility-grade power. This power source will help your tools and computers run more efficiently, preventing failures due to excessive heat. Components that power audio and video devices, such as TVs, stereos, and other sensitive electronics will produce clean sound and clear images. Cordless tool chargers will not damage expensive batteries. Many devices like variable speed motors, communications equipment, and certain cordless tools require pure sine power to operate. And appliances that may run on modified sine wave power, such as refrigerators and large appliances, will run better and with fewer issues using sine wave power. The best way to ensure serviceable longevity of your loads is to use UL listed, pure sine wave power inverters and inverter/chargers.



PURE SINE WAVE

Pros	Cons
Utility-grade power Will run any device	More expensive

MODIFIED SINE WAVE

Pros	Cons
Less expensive	Won't run sensitive power electronics like computers or variable-speed motors

DIMENSIONS AND MAGNUM BRAND INVERTER LINES

Pure Sine Wave

CSW Series Inverter LP Series Inverter MMS Series Inverter/Charger MS Series Inverter/Charger NSH-M Series Inverter/Charger N Series Inverter NP Series Inverter/Charger

Modified Sine Wave Inverter/Chargers

CMW Series Inverter ME Series Inverter/Charger MM Series Inverter Charger



OFFICES

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