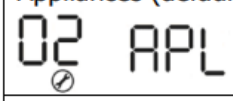
GENERATOR REQUIREMENT

(*below is for 220-240v European single phase type; North American 120v is marked in black)

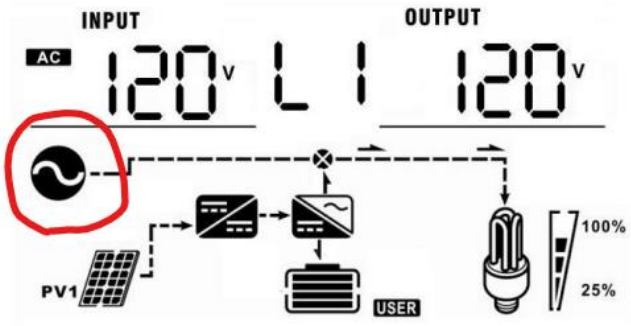
UPS mode (refer to inverter LCD setting “UPS”)
- Generator waveform THD: < 10%.
- Generator Vrms range: 180 ~ 270Vac (95 ~ 140Vac for North American 120V)
- Generator voltage crest factor(Vpeak/Vrms): < 1.6
- Generator peak voltage: <380V (<208V for North American 120V)
- Frequency range: 45Hz ~ 63Hz
- Frequency slew rate: <0.3Hz/sec

Appliance mode (refer to inverter LCD setting “APL”)
- Generator waveform THD: < 30%.
- If square wave output generator, output duty should greater than 60%
- Generator Vrms range: 100 ~ 270Vac (65 ~ 140Vac for North American 120V)
- Generator voltage crest factor(Vpeak/Vrms): < 1.6
- Generator peak voltage: <380V (<208V for North American 120V)
- Generator frequency range: 45Hz ~ 63Hz
- Generator frequency slew rate: < 0.3Hz/sec

AC input voltage range	Appliances (default)  UPS 

NOTE: Inverter-type generators are strongly recommended as they have cleaner output than conventional generators. If waveform, voltage, or frequency output of the generator is not of suitable quality, then it will be rejected by the inverter. This is often marked by the inability to connect under LINE MODE, either in the form of blinking / flashing or complete absence of the grid icon (marked red below).

Also, it is recommended to use a generator size that’s at least 150% larger than the maximum rating of the inverter, since gensets may deteriorate in output quality when they become fully loaded.



Important advice for 1-3K LV-MK, 5048MK, and 5048MKX models only

While using generators as AC input on our zero transfer time models (1-3K LV-MK, 5048MK and 5048MKX) is possible, it is NOT recommended because there's a strong possibility that the generator input cannot be "phase-locked" to establish a solid connection with the inverter. Zero transfer time inverters are designed based on online UPS topology and so it has a particularly high requirement to phase-lock with any AC input source. Generators output – even inverter-type generators – are known to have fluctuating frequency such that phase-lock may be very difficult, most likely not possible. While this typically won't result in any damage, the generator input would become useless. For best performance, please refrain from using generators on these models and apply only utility grid.