



## NE020AC125ATEZ Infinity Charging Module

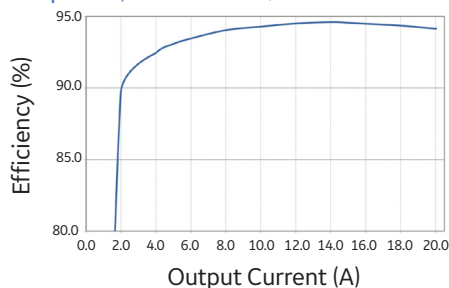


### Uncompromised Advanced Technology to Simplify Your Network

GE Energy's NE020AC125 Infinity Singlephase Battery Charging module is designed to efficiently transform energy from any AC source into the 125 Volt DC power needed for industrial and control battery systems. This means that one single module can be used globally to meet all your 125V powering needs.

Efficiency is market leading for diode protected, true hot pluggable, 125 Volt power.

Efficiency vs Output Current  
(Temp: 25C, Vin: 240V Vac,  
Freq: 60Hz, Vout: 125Vdc)



### A True System Solution

Infinity Chargers are part of the proven Infinity Power System particularly designed to meet the unique needs of industrial battery charging applications.

- Monitoring / control – the built in microprocessor controls and monitors all critical charger functions and communicates with the system controller using the built in Galaxy Protocol serial interface.
- Dual Voltage Compatible - unique connector pin designation allows the 125 Volt charger to be used in a “Universal” power shelf, alongside DC-DC converters supporting loads at 24 Volts dc.
- Plug and Play – installation of the charger in a shelf connected to a compatible system controller initializes all set up parameters automatically. No adjustments are needed.
- Parallel Load Share – chargers work together to share the load, while providing redundancy in case of an outage.
- Meets most 3 phase needs. Works with 208V 3 Phase in a phase to phase configuration. Works from 480V 3 Phase in a line to neutral configuration.
- As part of the Infinity family of power system solutions, the NE020AC125 has a complimentary shelf, battery charging controller and cabinet solutions for most applications.

### Advantages

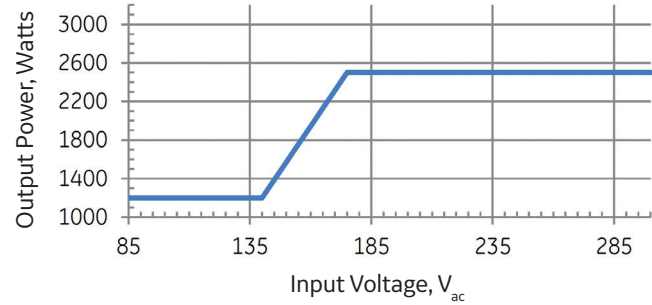
- Compact - 1RU form factor provides high power density 21 Watts / in.<sup>3</sup>
- Efficient - Peak efficiency of 94%, with 90% efficiency at 25% load.
- Flexibly provides 20 Amps of current from 90 Vdc to 125Vdc, constant power at 2500W from 125V to 160V.
- Operates over a broad temperature range (Starts at -40°C, runs from -5 to 55°C).
- Starts and runs on any AC line from 100 Vac to 277Vac.
- Fail safe performance – hot insertion capabilities allow for module replacement without system shutdown; soft start and inrush current protection prevent nuisance tripping of upstream breakers.
- Extended service life – parallel operation with automatic load sharing ensures that modules are not unduly stressed.

# Electrical Specifications

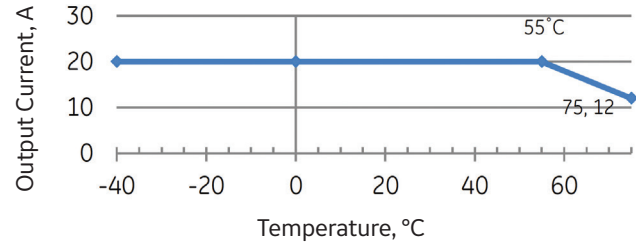
INPUT VOLTAGE & OUTPUT POWER	
Response to AC Input Voltage	Operates according to figure, turning on at all $V_{in}$ above $90V_{ac}$ . Output power $1200W < 140V_{ac}$ $2500W > 175V_{ac}$ Output power follows linear path between defined points. 305V max excursion voltage.
AC Input Current	15A max @ $120V_{ac}$ 12A @ $200-277V_{ac}$
Inrush Current	<18A after narrow EMI capacitor peak
Power Factor	0.98 @ loads over 50%
THD	< 5% @ loads over 50%
Harmonics	EN61000-3-2
Holdover	15 milliseconds, with $V_{out\ final} > 100V$
Frequency	45-66Hz or Dc

OUTPUT	
$V_{out}$	90-160V <sub>dc</sub> range Default = 125 V <sub>dc</sub>
$I_{out}$	10A @ low input line 20A @ high input line
Regulation	± 0.05% w/controller, 2% over life load and temperature
Dynamic Response	20 to 80% load step settles to less than 1% in 5 ms
Ripple	150 mV <sub>rms</sub> , 600 mV <sub>p-p</sub>
Voice Noise	<55dBnC
Efficiency	94% at full load
Start Up	Start up is monotonic
Soft Start	Starts up into fully discharged batteries.
Walk In	Current walk in over 8 to 10 seconds, can be disabled
Overload Shutdown	Shuts down with no damage when presented with a 15 milliohm short
Thermal Protection	Derates at 55°C and self protects with recoverable shutdown above 75°C

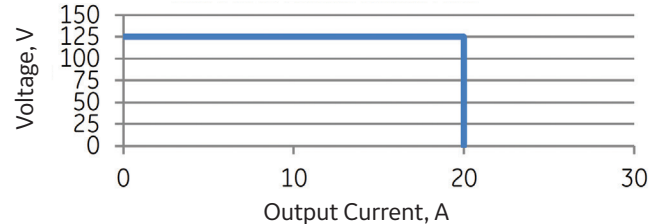
Output Power vs Input Voltage



Rated Output Current (at  $V_{in} > 175V_{ac}$ )



Current Limit Behavior



# Environmental, Compliance & Physical

Operating Ambient Temperature Range	-5°C to +75°C (Output derates at 2%/°C beginning at 55°C)
Cooling Method	Front to back airflow with onboard temperature controlled fans
Operating Relative Humidity	0 - 95% (non-condensing) for use in a controlled environment
Electromagnetic Compatibility	FCC Part 15, EN 55032 (CISPR32), EN 55035, Level A, GR-1089
Lightning Surge	EN/IEC 61000-4-5 Level 4 (Error free), ANSI C62.41 Category B 100 kHz ring and 1.2/50µs combination waves (6kV damage free)
Agency Certifications* Planned	ANSI/UL60950-1-2014, EN60950-1 2nd ed+A1+A2, CAN/CSA C22.2 No. 60950-1-07 +Am2: 2014, NEBS GR-1089, GR-63-CORE, CE, RoHS6/6
Heat Release	160 Watts, or 546 BTU/hr at full load of 2500 Watts, Noise<60 dBA @25°C
Mean Time Between Failure (MTBF)	300k Hours @ 25°C per Telcordia SR-332, Method 1, Case 3
Height x Width x Depth, Weight, Packaged Weight	1.63x5.23x13.85in (42x133x352mm), 5.05 lbs (2.2 kg), 5.95 lbs (2.7 kg)



