



Reliable Backup Power

The **Sine-i** is an affordable state of the art Inverter Charger with a difference. Designed to function as a standalone power source, similar to an uninterruptible power supply (UPS), the **Sine-i** provides clean, reliable, mains standby power (220V/50Hz) in case of a power failure. Some of the features are:

- Pure Sinewave Output
- Digital Signal Processor (DSP)
- Constant Voltage
- Constant Frequency
- Fast transfer (Mains-Battery-Mains)
- LCD Display with constant data update



Model APLS-DSP-2000-48

Employing Digital Signal Processing technology (DSP) the inverter produces a highly accurate and stable mains output voltage and frequency. Rated at 2500VA and able of handling surges up to 7500VA the **Sine-i** is an ideal standby and emergency power source for critical home and industrial appliances. Extremely fast transfer time from grid power to battery power (mains by-pass) and vice versa gives the unit virtual UPS status.

Runtime in inverter mode will obviously depend on the size of the load and battery capacity but can be anything from 1 to 10 hours and more. The minimum recommended battery capacity is 48V/100Ah (4 x 12V/100Ah batteries in series). Additional battery strings can be added at any time.

The integrated battery charger comes automatically into operation when grid power (ordinary mains power) has been restored. A powerful PWM 5-stage charger circuit ensures maximum battery protection and operating life.

The **Sine-i** features a host of safety functions to protect the inverter, load, as well as the battery bank (e.g. high voltage and low voltage cut-off, battery deep discharge and overcharge protection, etc.). A LCD display on the front panel provides clear information of actual operating status and possible faults. A complete auto self-test sequence is carried out and displayed when switching the inverter on. Power supply to the load (appliance) will also be controlled via the ON/OFF switch on the front panel. The unit is also fitted with a manual by-pass switch.

When brownouts, blackouts and extended power failures become a nuisance then the **Sine-i** becomes a necessity. Applications are numerous and the following are just a few examples:

At home the gate and garage doors always operate, no more interruptions while watching DSTV, recording a favorite TV program, surfing the Internet, or watching a movie with play station.

Commercial: Access control systems; critical office equipment incl. PABX, computer, printer, copier, fax, scanner; emergency and security lighting; incubators; cash registers; scanners; security cameras; ATM; lab equipment; medical equipment; vaccine fridge; small microwave oven; fans; public address system; electric tools; and so much more.



“Sine-i” Inverter Charger

Model Number APLS-DSP-2000-48

Nominal AC Voltage Rating: 220Vac
Nominal DC Voltage Rating: 48Vdc

Inverter Specification

Output Power: 2500VA
Surge Power Rating: 7500VA
Output Voltage: 220Vac
Output Frequency: 50 Hz + 0.1 Hz
Output Waveform: Pure Sinewave
Peak Efficiency: > 88%
Nominal Battery Voltage: 48Vdc
DC Input Voltage Range: 40Vdc + 0.4V to 57.6Vdc + 0.4V
Low Battery Cutout: 40Vdc + 0.4V
Total Harmonic Distortion: Less than 3%
Overload Capability: 160% for 5 Sec, 105% for 6 Min

Charger Specification

Charger Control Circuit: Fuzzy Logic Control (FCL)
Charging Current: 10.0Amp + 1.0A
AC Input Voltage Range: 110Vac – 285Vac
Maximum Battery Boost Level: 57.6Vdc
Maximum Battery Float Level: 54.8Vdc
Equalisation: Manual
Compatible Battery Types: Lead Acid / VRLA / SMF
Mains Input Power Factor: 0.85 to Unity

General Specifications

LCD Indications: Backlit LCD Messages
- Input Voltage / Input Frequency
- Mains Fail / Inverter ON / Inverter OFF
- Battery Charging / Charged
- Short Circuit Protection
- Overload Attention / Protection
- Low Battery Attention / Protection
- Mains Circuit Breaker tripped
- Mains Low / High Cutout
- Output Voltage / Current
- Problems and Remedial Actions

Enclosure: Sheet Steel
Colour: Light Gray
Protection: IP 20
Dimensions: L = 548mm x W = 345mm x H = 225mm
Weight / Mass: 30.2kg
Operating Temperature: 0 - 45°C
Audible Noise Level at 1 Meter: < 55 dB
Relative Humidity: Max. 95% Non Condensing

General

Approvals: ISO 9001 : 2000
Certification: CE Certified
Warranty: 12 Months (conditional)

The manufacturer reserves the right to change specifications without prior notice.