

100VA Portable Sinewave Inverter with built-in Battery back-up and Charger

CSI 100-24V24AH-UA-PEL



- Rugged industrial quality
- Field-proven design topology
- Convection cooled - no fan
- Full electronic protection
- Splash-proof portable Pelican case

This compact, portable inverter with built-in battery bank and charger is designed for operation in field-environments. The output is a pure sine-wave voltage suitable for delicate test equipment and similar loads. The charger section operates from all typical AC voltages worldwide, and provides 27.6V float voltage. It was designed for slow recharging of the battery and does not have sufficient capacity for a continuous on-line UPS application at full output load. For continuous on-line operation, a custom version with higher charger capacity is available. The built-in charger can be kept on standby mode indefinitely and the continuous float voltage maintains the battery. The battery bank, which is placed at the bottom of the Pelican case for mechanical stability, contains two 12V/24Ah batteries with built-in safety fuse. Back-up capacity is minimum 3 hours at full 100VA output. Also, 24Vdc power can be drawn directly from the battery at 6A maximum, for other 24Vdc input equipment. The batteries take approximately 15 hours to reach full charge for a depleted battery. This inverter system is heavily ruggedized and conformal coated, and is housed in a splash proof Pelican top loader case with a sturdy handle for easy portability in the field. It is convection cooled and operates over a 0°C to +50°C temperature range without de-rating. The cover must be kept open during operation and charging. Full electronic protection minimizes the possibility of failure due to abnormal operating conditions, including application errors. Generous design headroom and the use of designed-in components with established reliability result in a high MTBF.

GENERIC SPECIFICATIONS

Charger Input Voltage

95-264Vac universal
47-63Hz
Input Current: 1Arms max.

Charger Input Protection

Inrush current limiting
Varistor
Internal safety fuse
Battery safety fuse
Lower voltage than the specified minimum input will not damage the unit

Battery Dimensions (W x H x L)

Two PE 12V24A or equivalent for 24V
333 x 175 x 127mm total
(13.1" x 6.9" x 5" total)
Placed on the bottom of Pelican case

Low Battery Disconnect

Not available on this unit

Isolation (Charger Input)

2250VDC input to chassis
4300VDC input to output
8mm spacing
500VDC output and battery to chassis

Standards

Designed to meet EN 62368 and related standards

EMI

EN 55032 Class A with margins

Switching Frequency

47kHz ± 2kHz (Charger)

Charging Voltage/ Current

27.6V±0.2V/3A

Recharge Time

Approx. 15 hours for empty battery.
The built-in charger provides float charging and can be kept on standby mode indefinitely.

AC Output Voltage/Current

115Vac/0.85A /60Hz
(400Hz available).
230Vac/0.43A/50Hz is also available
100VA max. (continuous)
The output is floating, either terminal can be grounded

Battery Voltage/Current

The fused battery terminals are accessible 24Vdc/6A max

Wave Form (AC output)

Sinusoidal
Total Harmonic Distortion less than 5% at full load
Back-up time:
3 hours at 100VA load
7 hours at 50VA load

Line/Load Regulation (AC output)

Maximum +/- 2% from no load to full load

Load Crest Factor

Maximum 2 at 90% load

Output Noise (AC output)

High frequency ripple is better than 500mVrms (20MHz BW)

Output Overload Protection

Current limiting with short circuit protection. At 120VA the output goes into cycling protection mode.

Output Overvoltage Protection

140V by internal supply voltage limiting

Efficiency

Typically 78% at full load

Operating Temperature

0°C to +50°C without derating.
Extended temperature range available

Battery Temp. Compensation

Not available on this model

Temperature Drift

0.05% per °C over operating temperature range

Cooling

By natural convection

Environmental Protection

Heavy ruggedizing
Conformal coating
Splash-proof Pelican case

Shock/Vibration

IEC 61373 Cat 1 A&B

Humidity

5 - 95% non-condensing

MTBF

150,000h at 45°C
Battery excluded
Demonstrated MTBF is significantly higher

Indicators

Charger ON LED visible through cooling slots

Control input

None

Alarm Outputs

None on this model

Dimensions (L x W x D)

Pelican Top Loader Case #1430
43 x 24.4 x 34.1 cm
16.93" x 9.61" x 13.42"

Weight

Approx 22 kg (48 lbs.) including battery
5kg (11 lbs.) without battery.

Connections

Line Cord for AC input,
Standard AC outlet for 115Vac
Battery terminals for 24V output are available by using alligator clamps

RoHS Compliance

Compliant

Warranty

Two years subject to application within good engineering practice
Contamination related failures and shipping cost excluded.

ABSOPULSE power supplies are designed and built to customer requirements. The specifications on this data sheet are generic guidelines only and are subject to change

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