

1kVA, IP66-Rated, Rugged, Industrial Quality DC-AC Sine Wave Inverter

1kVA-D7G (IP66)



- Packaged in waterproof IP66 enclosure
- Rugged, field-proven design
- Convection cooling
- Filtered input/output
- Full electronic protection

This industrial quality DC-AC inverter utilizes field proven, microprocessor controlled high frequency PWM technology to generate the required output, with pure sine wave output voltage. It is packaged in a rugged, waterproof, die cast aluminum IP66 enclosure. The input and output are via sealed cable glands, circular connectors or custom connections. Cooling is by internal conduction to the walls of the IP66 enclosure and convection by the external cabinet walls. This enables operation within a wide temperature range for full specification. The DC/DC input stage boosts the input voltage to a higher DC bus voltage, which feeds the DC/AC inverter to generate the required AC output. The input and output are filtered for low noise. Full electronic protection, low component count, large design headroom, and the use of components with established reliability contribute to a high MTBF. The units are manufactured at our plant under strict quality control. Customized versions are available. This design is suitable for transportation, mining, marine, oilrig, military and other severe environments.

SPECIFICATIONS

Input Voltage

24V, 36V, 48V, 125V, 250Vdc
± 15% are standard
Other inputs available on request
Consult factory for other
input voltages and ranges

Input Protection

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

Isolation

Depending on input and output
voltage. As a minimum:
1500Vdc input to chassis
3000Vdc output to chassis
1000Vdc output to chassis

Standards

Designed to meet UL 458,
EN60950-1 and corresponding
international standards

EMI

EN 55032 Class A with margins

Output Voltage

115Vac /8.7Arms continuous
at 60Hz or 400Hz; or
230Vac/ 4.3Arms continuous at
50Hz
Output neutral is connected to
the chassis internally
Isolated floating output optional
Other outputs available on
request

Output Wave Form

Sinusoidal

Total Harmonic Distortion

Less than 5% at full load

Line/Load Regulation

Better than ± 6% from no load
to full load.
± 2% load regulation option is
available

Load Crest Factor

2 at 90% load

Output Noise

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

Output Overload Protection

Current limiting with short circuit
protection
Thermal shutdown with automatic
recovery in case of insufficient
cooling

Output Overvoltage Protection

140Vac (for 115Vac output) or
280Vac (for 230Vac output) by
internal supply voltage limiting

Efficiency

Input voltage dependent
Typically better than 80% at full
load

Operating Temperature

0°C to +50°C temperature for full
specification
Extended temperature range
available on request.

Temperature Drift

0.05% per °C over operating
temperature range

Cooling

By convection

Environmental Protection

IP66 enclosure
Internal modules: ruggedized and
conformal coated

Shock/Vibration

IEC 61373 Cat 1 A&B

Humidity

5-100% condensing

MTBF

130,000 hours at 45 °C
Demonstrated MTBF is
significantly higher

Indicators

None

Control Input

None

Alarm Output

Not installed
Optional output Fail Alarm

Dimensions (H x W x D)

D7G: 609.6 x 609.6 x 275 mm
24" x 24" 10.84"

Weight

Approx 25kg (55 lbs)

Connections

Internal barrier type terminal block
Accessible via cable glands

RoHS Compliance

Compliant

Warranty

Two years subject to application
within good engineering practice

The specifications on this data sheet are generic and are subject to change. Enhancements to these specifications can be provided upon request.

OEM of professional quality AC/DC power supplies and battery chargers, DC/DC converters, DC-AC sine-wave inverters, phase and frequency converters, DC-output UPS systems and complete power systems in 19" and 23" racks since 1982. Custom or standard.



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