

30VA, IP66-Rated, Rugged, Industrial Quality DC-AC Sine Wave Inverter CSI 30-D1 Series (IP66)



- Sinusoidal output voltage
- Packaged in a watertight IP66 enclosure
- Internal module ruggedized and conformal coated
- Rugged, field-proven design
- Filtered input/output
- Full electronic protection

This rugged DC-AC inverter utilizes field proven, microprocessor controlled high frequency PWM technology to generate up to 30VA low voltage pure sine wave output. The units are packaged in waterproof, rugged, die cast aluminum IP66 enclosures. The input and output are via sealed cable glands, circular connectors or custom connections. The internal boards are ruggedized and conformal coated for increased immunity to high levels of shock and vibration. Cooling is by internal conduction to the walls of the IP66 enclosure and by baseplate to an external chassis or cabinet wall, and additional convection via the outside surface. This enables operation within a wide temperature range for full specification. If installed on a heat-sinking surface, cooling is further enhanced and the converters achieve higher output power. 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, generous design headroom and the exclusive use of components with established reliability also contribute to high MTBF. The unit is manufactured at our plant under strict quality control. Customized versions are available. Typical applications include CCTV cameras for transportation, mining, marine, oil rig, military and other severe environments.

SPECIFICATIONS

Input Voltage

12V, 24V, 36V, 48V or 125Vdc
± 15% are standard
Min. startup at 12V: 10.5-16V
Other inputs are available on request.

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

According to input voltage
Min. 700Vdc input to chassis
Min. 1000Vdc input to output
700Vdc output to chassis
Floating output

Standards

Designed to meet
C22.2 No. 107.1 - 01,
UL 458 and EN 60950-1

EMI

EN 55022 Class A with margins

Terminal Block Pin-Out (Internal)

INPUT			NOT USED			OUTPUT		
-	+	GND	NOT USED	NOT USED	NOT USED	L ₂	L ₁	NOT USED
9	8	7	6	5	4	3	2	1

The terminal block is accessible via cable glands

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.



Output Voltage

115Vac/0.26Arms continuous at 60Hz or 400Hz; or
230Vac/0.13Arms continuous at 50Hz
Output is floating, either terminal can be grounded
Other outputs are available on request.

Output Wave Form

Sinusoidal

Total Harmonic Distortion

Less than 6% at full load

Line/Load Regulation

± 3% from no load to full load

Load Crest Factor

2 at 90% load

Output Noise

High frequency ripple is better than 200mVrms (20MHz BW)

Output Overload Protection

Current limiting with short circuit protection

Output Overvoltage Protection

30V by internal supply voltage limiting

Efficiency

Input voltage dependent
Typically 80% at full load

Operating Temperature Range

-25 °C to 55 °C for full specification
Extended temperature ranges available on request

Temperature Drift

0.03% per °C over operating temperature range

Cooling

Conduction to customer heat-sink or chassis and by additional natural convection via the surface of the IP66 enclosure

Environmental Protection

IP66 enclosure
Internal module: Ruggedized and conformal coated
Potting of the internal module is also available

Shock/Vibration

IEC 61373 Cat 1 A&B

Humidity

5-100% condensing

MTBF

140,000 hours at 45°C
Demonstrated MTBF is significantly higher

Indicators

None

Control Input

None

Alarm Output

None
Optional output fail alarm (Form C)

Package/Dimensions (L x W x H)

D1: 220 x 120 x 80 mm
8.7" x 4.7" x 3.1"
D1 with baseplate:
267 x 117 x 4 mm
10.5" x 4.6" x 0.6"

Weight

Approx. 2.4 kg; 5.3 lb

Connections

Internal barrier-type terminal block accessible via sealed cable glands.
Optional connectors instead of cable glands

RoHS Compliance

Compliant

Warranty

Two years subject to application within good engineering practice.

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