30VA, IP66-Rated, DC-AC Sine Wave Inverter, Rugged, Industrial Quality
24Vac Output for Monitoring Cameras
CSI 30-D1 Series (IP66)

- Sinusoidal output voltage
- Packaged in a waterproof 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 rugged, waterproof, IP66 die cast aluminum 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. This design is suitable for powering monitoring cameras in 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

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 EN62368-1

EMI
EN 55032 Class A with margins

Output Voltage
24Vac/1.25Arms/50Hz
30VA continuous
Output is floating, either terminal can be grounded
Other outputs are available

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 additional natural convection via the surface of the IP66 enclosure

Environmental Protection
IP66 enclosure
Internal module: Ruggedized and conformal coated

Shock/Vibration
IEC 61373 Cat 1 A&B

Humidity
5-100% condensing

MTBF
150,000 hours at 45ºC
Demonstrated MTBF is significantly higher

Indicators
None

Control Input
None

Alarm Output
None
Optional output fail alarm (Form C)

Package/Dimensions (W x H x D)
D1: 120 x 84 x 267 mm
4.7" x 3.3" x 10.5" including baseplate
D1 baseplate:
117 x 4 x 267 mm
4.6" x 0.6" x 10.5"

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.

Terminal Block Pin-Out (Internal)

INPUT						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.

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

OEM of industrial and railway quality DC-DC converters, AC-DC power supplies and battery chargers, 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. ABSOPULSE is a BABT-approved Facility

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Made in Canada