

600Vdc Input, 500VA Industrial Quality DC-AC Sine Wave Inverter CSH 500-F6 Series



- 600Vdc input (450-800V)
- Sinusoidal output voltage
- Field-proven design topology
- Conduction/convection cooled - no fan
- Low profile, compact size
- Full electronic protection

This rugged, industrial quality DC-AC inverter uses field proven, microprocessor controlled high frequency PWM technology to generate the required output power with pure sine wave output voltage. It is a mature design concept with a track record in numerous previous applications. The DC-DC input stage converts the input voltage to a DC bus voltage, which feeds the DC-AC inverter to generate the required AC output. The high frequency conversion enables a compact construction, low weight and high efficiency. The input and output are filtered for low noise. Cooling is by conduction via baseplate and by natural convection through the cooling slots. Most heat generating components are installed on aluminum heatsink blocks which are thermally connected to the base plate. This also ensures exceptional mechanical ruggedness. Conformal coating provides protection against humidity and airborne contaminants. Full electronic protection, low component count, large design headroom, and the exclusive use of components with established reliability contribute to a high MTBF. It is manufactured at our plant under strict quality control. A railway quality version of this design or a wider input range of this is also available.

SPECIFICATIONS

Input Voltage

600Vdc nominal
450-800Vdc operating range
Input Current: 1.3A max
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

3400Vdc input to chassis
4300Vdc input to output
5600Vdc type test
2250Vdc output to chassis
Isolated floating output

Standards

Designed to meet
C22.2 No. 107.1 - 01, UL 458 and EN60950-1

EMI

EN55032 Class A with margins

Output Voltage

115Vac/3.5Arms continuous at 60Hz or 400Hz; or
230Vac/1.7Arms continuous at 50Hz
Isolated floating output
Consult factory for other output requirements

Output Wave Form

Sinusoidal

Total Harmonic Distortion

Less than 5% at full load

Line/load Regulation

±5% from no load to full load

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

By internal supply voltage limiting

Efficiency

Typically 85% at full load depending on input/output configuration

Operating Temperature

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

Temperature Drift

0.05% per °C over operating temperature range

Cooling

Conduction via baseplate to customer heat-sink or chassis and by natural convection

Environmental Protection

Basic ruggedizing
Conformal coating

Shock/Vibration

IEC 61373 Cat 1 A&B

Humidity

5 - 95% non-condensing

MTBF

150,000 hours at 45 °C
Demonstrated MTBF is significantly higher

Indicators

None

Control Input

None

Alarm Output

None
Output Fail Alarm (Form C) as option

Package/Dimensions (W x H x L)

F6: 210 x 64 x 365mm
(8.3" x 2.5" x 14")

Mounting holes are clear

Weight

3.2kg (7 lbs)

Connections

Barrier type terminal block with 3/8" spacing (6-pole + 12-pole)

RoHS Compliance

Compliant

Warranty

Two years subject to application within good engineering practice

Terminal Block Pin-Out

AC OUTPUT								GND				DC INPUT					
NOT USED	NOT USED	L1	L2	NOT USED	NOT USED	NOT USED	NOT USED	+	+	+	+	+	+	+	+	+	+
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18

Please note that ABSOPULSE inverters are designed and built to customer specifications. The specifications on this data sheet are generic and will vary depending on input/output configuration and other customer requirements. Generic specifications are subject to change.

Designer and manufacturer of quality converters, inverters, UPS systems, complete rack mount systems and DC-input fluorescent lamp inverters since 1982. Custom or standard. Absopulse is a BABT-approved Facility



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