

## 600Vdc Input, 400VA Industrial Quality DC-AC Sine Wave Inverter CSH 400-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: 1.1A 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

EN55022 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
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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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