

# 100VA Rugged, Industrial Quality DC/AC Sine Wave Inverter

## Accepts Input Voltages 24V, 36V, 48Vdc

### CSI 100-3W-F1 Series



- Sinusoidal output voltage
- Wide input range covering 24V, 36V and 48Vdc
- Rugged, field-proven design
- Filtered input and output
- Conduction/convection cooling
- Full electronic protection
- Plug-in format available

This rugged DC/AC inverter utilizes our field proven, microprocessor controlled CSI 111 high frequency PWM technology to generate the required output power with pure sine wave output voltage. It is based on a mature design topology with a track record in numerous applications. The wide operating range (20-60Vdc) allows operation from 24V, 36V and 48Vdc input sources. Operator error is minimized. This also simplifies stock keeping - just one model covers three input ranges. The DC/DC input stage boosts the input voltage to an internal bus voltage, which feeds the DC/AC inverter to generate the required AC output. The use of high frequency conversion enables a compact construction, low weight and high efficiency. The input and output are filtered for low noise. Cooling is via baseplate to a heat-sinking surface and by natural convection. 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 against airborne contaminants. 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.

### SPECIFICATIONS

#### Input Voltage

24V, 36V and 48Vdc nominal  
20-60Vdc operating range  
Consult factory for other inputs

#### 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

Compliant to input and output voltages according to the corresponding standards  
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

#### Output Voltage

115Vac/0.8Arms continuous at  
60Hz or 400Hz; or  
230Vac/0.4Arms 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

±3% from no load to full load

#### Load Crest Factor

2 at 90% load

#### Output Noise

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

#### Output Overload Protection

Current limiting with short circuit protection

#### Output Overvoltage Protection

Output voltage is limited by internal supply voltage

#### Efficiency

Input voltage dependent  
Typically 80% at full load

#### Operating Temperature Range

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

#### Temperature Drift

0.05% per °C over operating temperature range

#### Cooling

Conduction to customer heat-sink or chassis and natural convection

#### Environmental Protection

Basic ruggedizing  
Full ruggedizing and conformal coating as option

#### Shock/Vibration

IEC 61373 Cat 1 A&B

#### Humidity

5 - 95% non-condensing

#### MTBF

120,000 hours at 45°C  
Demonstrated MTBF is significantly higher

#### Indicators

Green output ON LED visible through cooling slots

#### Control Input

None

#### Alarm Output

None  
Optional output fail alarm (Form C)

#### Package/Dimensions (W x H x D)

F1: 114 x 51 x 201 mm  
(4.5" x 2" x 7.9")  
Includes terminal block and flanges  
Mounting holes are clear

#### Weight

Approx. 0.8kg (1.8 lb)

#### Connections

9-pole barrier type terminal block, 3/8" spacing

#### RoHS Compliance

Compliant

#### Warranty

Two years subject to application within good engineering practice.

#### Terminal Block Pin-out

AC OUTPUT			DC INPUT					
NOT USED	L1	L2	NOT USED	NOT USED	NOT USED	GND	+	-
1	2	3	4	5	6	7	8	9

**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. ABSOPULSE is a BABT-approved Facility*



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