

## 500VA, 3-Phase Industrial Quality DC-AC Sine Wave Inverter, Rugged, Compact CTP 500-F7 & CTP 500-F7W Series

- 3-Phase sinusoidal output voltage
- Filtered input/output
- Conduction/convection cooled
- Fan cooled for 24Vdc and 36Vdc input
- Compact construction
- Full electronic protection
- Rugged, field-proven design



**F7 chassis for 48V,  
110V, 125Vdc input**



**F7W chassis for  
24V & 36Vdc input**

This rugged industrial quality DC-AC inverter uses field-proven, microprocessor controlled high frequency PWM technology to generate the required output power with 3-phase sine wave output voltage. The use of high frequency conversion enables compact construction, low weight, and high efficiency. The input and output are filtered for low noise. Cooling is by conduction via baseplate. The 24V and 36Vdc input versions in a F7W chassis are cooled by high-quality built-in fans. Additional cooling is achieved by natural convection through the cooling slots. All heat generating components are installed on aluminum heatsink blocks which are thermally connected to the base plate. This also provides exceptional mechanical ruggedness. Conformal coating provides protection against humidity and 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, 48V, 110V, or 125Vdc  
Consult factory for other inputs

#### Input Protection

Inrush current limiting  
Varistors  
Reverse polarity protection  
Internal safety fuses  
Lower voltage than the specified minimum input will not damage the unit

#### Isolation

According to input/output as minimum  
1500Vdc input to chassis  
1500Vdc input to output  
2250Vdc output to chassis  
Floating output  
Neutral can be grounded if required

#### Standards

Designed to meet  
C22.2 No. 107.1 - 01,  
UL458 and EN62368-1

#### EMI

EN55032 Class A with margins

#### Output Voltage

208Vrms (L-L)/3-phase/60Hz or 400Hz or  
380Vrms or 400Vrms (L-L)/ 3-phase/  
50Hz or 60Hz.  
500VA continuous output  
Phase-to-neutral voltages can also be used  
Consult factory for other voltages, frequencies and options

#### Output Wave Form

Sinusoidal

#### Total Harmonic Distortion

Less than 5% at full load

#### Line/Load Regulation

±6% 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

By internal supply voltage limiting

#### Efficiency

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

48V, 110V, 125Vdc input versions  
cooling by conduction via baseplate  
24V and 36Vdc input versions  
cooling by high quality built-in fans and conduction via baseplate

#### Environmental Protection

Basic ruggedizing  
Conformal coating

#### Shock/Vibration

IEC 61373 Cat 1 A&B

#### Humidity

5 - 95% non-condensing

#### MTBF

Min. 110,000 hours at 45°C  
Demonstrated MTBF is significantly higher

#### Indicators

None

#### Control Input

None  
Remote shutdown or enable as an option

#### Alarm Output

None

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

For 48V, 110V, 125Vdc inputs, F7:  
254 x 73 x 350.5 mm  
10" x 2.875" x 13.8" excludes terminals  
For 24V and 36V inputs F7W chassis:  
280 x 73 x 350.5 mm  
11" x 2.875" x 13.8" excludes terminals  
Mounting holes are clear

#### Weight

F7: 3.2 kg, 7 lb.  
F7W: 4 kg, 9 lb.

#### Connections

Input: 6-pole terminal block, 3/8" spacing  
Output: 12-pole terminal block, 3/8" spacing

#### RoHS Compliance

Compliant

#### Warranty

Two years subject to application within good engineering practice.

#### TB pin-out

3-PHASE OUTPUT												DC INPUT					
GND	PH 1	NOT USED	NOT USED	NOT USED	PH 2	NOT USED	NOT USED	NOT USED	PH 3	NOT USED	GND	GND	-	-	+	+	
1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6
⊥	~				~				~		⊥	⊥	-	-	+	+	

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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