



FEATURES

- **Lightweight, Solid State Design**
- **Produces Perfect Sinewave <2% THD**
- **Rugged for Airborne & Mobile Environments**
- **Lightweight and Compact**
- **DO160C and MIL-STD-810 Compliant**

PRODUCT OVERVIEW

TDI - Advanced Conversion Products manufactures solid state frequency converters for a wide variety of applications including aircraft and mobile military platforms. Featuring an ultra-wide autoranging input stage, these rugged units incorporate high frequency PWM technology to "synthesize" a precision regulated sinusoidal output with less than 2% Total Harmonic Distortion.

Designed for airborne applications, these robust frequency changers are among the lightest units available. The 10kVA model weighs under 150 pounds! The unit depicted is utilized on C-130 aircraft and operates from one of two available AC sources such as two engine generators. Standard 100 milliseconds hold-up time insures orderly shutdown. The transfer between input busses is automatic and seamless.

TDI - Advanced Conversion Products frequency changers are available within the power range of 1kVA through 10kVA, single and 3-phase models. Tailored configurations are available to suit nearly every need.

Robust Systems For Critical Applications

TDI - Advanced Conversion Products

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UNIT SPECIFICATIONS

INPUT

Nominal Inputs: 115/200VAC 3-Phase 400Hz
Compatible with MIL-STD-704A (Aircraft Power)
Under Voltage Protected
Overvoltage Protected

OUTPUT

Voltage regulation better than 2%
Frequency crystal controlled better than 0.1 % stability
Fully Isolated
Sinusoidal waveform with less than 2% THD
DC Content less than 100 millivolts

POWER RATING

10KVA Nominal
Crest Factor: 2.5 Maximum
Load Power Factor: 0 to 1 leading or lagging

EFFICIENCY

Efficiency: 87% Min. Half Load to Full Load
Stand-by power: 200 Watts No Load

INDICATORS / CONTROLS

Input Available
Normal / Fault

PROTECTION

Overtemperature
Output Short Circuit
Output Overload
Input Overload
Input Undervoltage

ENVIRONMENTAL

Cooling: internal fans
Operating Temp: -55° to +55°C (to 71°C derated)
Vibration: 15-2000Hz, 0.01G² / Hz PSD
Shock: 15G 11msec half sine shock pulses
Altitude: To 40,000 ft

RELIABILITY

MTBF: Exceeds 100,000 hours

MECHANICAL

I/O Connectors: MS Series
Weight: 150 lbs. Max (68.04 kg)
Size: 14"W (35.56cm) x 18"H (45.72cm) x 20"D (50.8cm)

OTHER ACP PRODUCTS

Advanced Conversion Products creates high performance, robust AC and DC power systems for mission critical applications in telecommunications, industrial, rapid transit, airborne, ground mobile and shipboard environments. Uninterruptible back-up power and critical system control are "the sine of perfection" from ACP.

Special technologies include modular lightweight, high performance sine wave inverters, rugged AC-DC and DC-DC converters, AC frequency changers and Uninterruptible Power Systems.



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Note that the exact product shown on this data sheet may not be available for purchase due to prior contractual obligations. Please contact TDI for current available products or to discuss a modification to an existing design.

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