

### AFC-7003-(50, -60 or -400)

#### FEATURES

- Single rack space (6U high)
- Rugged construction
- Unique overload protection
- Microprocessor controller with Vacuum Fluorescent Display
- RS-232 or 28 VDC Output control



#### AIRBORNE FREQUENCY CONVERTER

Behlman's AFC-7003 is a ruggedly built, modified COTS frequency converter designed to convert three-phase aircraft power to regulated three-phase (115/200 VAC) 50,60 or 400 Hz power. The AFC-7003 is ruggedly built to support aircraft takeoffs and landings and designed to meet the input power requirements of MIL-STD-704 and RTCA-DO-160.

In the AFC-7003 you'll find the quality features you expect from Behlman. Low output THD, high efficiency, plus excellent line and load regulation.

**INPUT** 115/200 VAC, +/-10%, 3-Ph, WYE, 350-800 Hz, @ 30 Amps/phase max. (power derated above 700 Hz)  
Multi Pulse Input Transformer for Low Input Current THD

**OUTPUT**  
**Power:** 6900 VA  
**Voltage:** 115/200 VAC, three-phase  
**Frequency: (F)** 50 Hz, 60 Hz or 400 Hz  
**Accuracy:** +/- 0.1 Hz  
**Current:** 20 Amps/ phase  
**Crest Factor:** 3 : 1  
**Power Factor:** 100% of rated output into any power factor load  
**Distortion:** 1.5% THD typical, measured at full load, 115 Volts, 60 Hz  
**Line Regulation:** +/- 0.1% for +/- 10% line change  
**Load Regulation:** +/- 0.7%, no load to full load  
**Efficiency:** 80% typical

#### PROTECTIVE CIRCUITS

**Input:** Fast-acting main circuit breaker with guard  
**Constant Current:** Overload automatically causes voltage fold-back to provide maximum current without distorting output waveform

There's also a unique overload protection system that folds back voltage to maintain rated output current without waveform distortion. Units are supplied with RS-232 remote control and 28 VDC control of Output On/Off. In addition the unit has provisions for slide mounting.

Small size, rugged construction, quiet operation and high efficiency make the AFC-7003 ideal for use on aircraft to convert aircraft power to ground power.

**Short Circuit:** Short-circuit overload electronically latches output open to protect load... power restored by cycling circuit breaker  
**Thermal:** Internal temperature sensor prevents heat damage

#### CONTROLS / INDICATORS

**Power On/Off:** Circuit breaker with guard  
**Control/Display:** Microprocessor controller with 40 characters X 2 lines Vacuum Fluorescent display. Displays Volts, Frequency, Current and Current Limit. Fault indicator for Over Voltage (OV), Over Current (OI), Over Temperature (OT), Constant Current (CC) and Short Circuit (OL) (Set Current Limit with RS-232 interface)  
**Output On/Off:** ON- with Safety Interlock connector supplied with unit. ON/OFF- with customer supplied 28VDC. ON/OFF- with RS-232 Interface.  
**Output Indicator:** Indicates output relay is energized  
**Busy Indicator:** Indicated a command is being processed by the microprocessor  
**Reset Switch:** Recessed push-button switch to reset controller  
**Remote Control:** RS-232 to monitor unit, turn output On/Off and set current limit

# AC Power Source/ Frequency Converter

## MECHANICAL & ENVIRONMENTAL

**Dimensions:** High-strength 19" (48.3 cm)  
rack mount chassis,  
10.5"H X 22"D (26.7 cm X 55.9 cm)

**Weight:** 128 lbs (58 kgs) Max

**Cooling:** Internal fans

**Air intake:** Front and Sides

**Air Exhaust:** Rear

**Input Connections:** J1- MS3102-24-10P

**Output Connections:** J2- MS3102-32-17S

**Remote control:** J3- D38999-20WB35PN

Designed to meet the conditions as defined in MIL-STD-810, Method 520.2

**Operating Temperature:** -4° to 123° F (-20° to 50° C)

**Storage Temperature:** -4° to 140° F (-20° to 60° C)

**Shock:** Designed to meet, 18 impacts of 15G's for the duration of 11+/-1 millisecond.

**Vibration:** Random Vibration Frequency range of 20 to 1000Hz with Power spectrum density of 0.04g<sup>2</sup>/Hz and from 1KHz to 2KHz beginning at 0.04g<sup>2</sup>/Hz and drop at a linear -6db/octave rate.

**Humidity:** 0-95% RH non-condensing.

**Altitude:** Designed to operate at altitudes of 10,000 feet. Can be exposed to 40,000 feet in a non-operating state, and operate normally when returned to 10,000 feet or less.

**Fungus:** Designed not to afford fungus nutrition

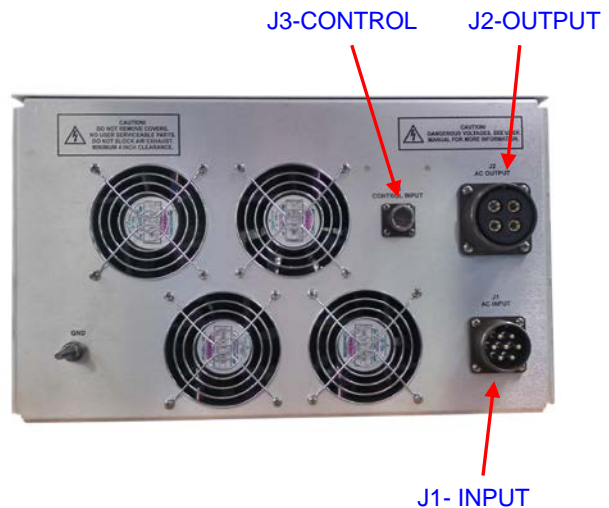
**Electromagnetic Interference:** Designed to meet or exceed MIL-STD-461E requirements, intended for installation on Aircraft. To meet RE102 requirement, shielded cable shall be used for Input and Output Cabling.

## ELECTRICAL CONNECTIONS:

J1 - Power Input Connector

J2 - Power Output Connector

J3 - Control Connector  
(Supplied with Safety Interlock plug)



## OPTIONS

S Slides

## MODEL SELECTION

AFC-7003-60-S

AFC-7003 with 115/200 VAC, three-phase, 60 Hz  
output and optional slides



[www.behlman.com](http://www.behlman.com)

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