Behlman Power Products

**AC Power Source/ Frequency Converter**

**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.
- **Output On/Off:** ON- with Safety Interlock connector supplied with unit.
- **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

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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 0.04g²/Hz and from 1KHz to 2KHz beginning at 0.04g²/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