270 VDC / 400 Hz Dual Output Converter

90 kVA 400 Hz/72 kW 270 VDC in a Single Converter

270 VDC Meets All F-35 & F-22 Power Requirements

270 VDC / 400 Hz
Dual Output Converter

ADVANTAGES

- EMI hardened enclosure
- Very small and light weight
- NFPA 70 Article 500 Class 1 Div. 2 compliant with 18" Floor Stand
- Easy-to-read Digital Information Display
- BIT: Digital diagnostics aid troubleshooting

Our 270 VDC / 400 Hz Dual Output Converter is the only power supply of its type in the industry. The 270 VDC meets the tough requirements for today's most advanced fighter aircraft (F-35 and F-22). In addition, the 400 Hz meets or exceeds MIL-STD-704 with the added advantage of individual phase control. This unique dual output converter is compact, light weight, quiet, and extremely small. It can be floor or overhead mounted, and is also available on a small trailer for ease of mobility.

ITW MILITARY GSE

ITW Military GSE is an Illinois Tool Works (ITW) company. ITW is a diverse Fortune 200 company with over 850 operating divisions in 49 countries worldwide. ITW Military GSE is a world-class engineering-based company headquartered in Palmetto, Florida. We specialize in the design, manufacture, and world wide service of Military Aircraft Ground Support Equipment providing GSE to U.S. and foreign military programs since 1972.

PERFORMANCE FEATURES

400 Hz:

- Individual phase regulation at aircraft interface, perfect voltage regulation even with unbalanced loads
- Meets and exceeds MIL-STD-704F requirements
- Plug 'n' Play cable compensation: Calibrated Automatic Line Drop Compensation eliminates voltage drops due to cabling, providing 1% voltage regulation at the aircraft interface
- Total harmonic content <2%
- Soft Start feature eliminates in-rush current
- 12 Pulse front end for low input current harmonics

270 VDC:

- Meets and Exceeds MIL-STD-704F requirements
- Meets F-35 and F-22 power requirements
- Total harmonic content <0.015%
- 12 Pulse front end
- Output Voltage Regulation ±3 VDC
- Soft Start feature eliminates in-rush current

ETL LISTED
POWER UNITS
OTHER THAN
CLASS 2
3176982
CONFORMS TO UL STD 1012

NSF
Registered to AS9100 (with ISO 9001)

Model	Input Power	Output Power	Length	Width	Height	Weight
270 VDC/400 Hz Combination Unit	94 amps @ 480 VAC, 60 Hz	270 VDC, 72 kW	26.5" (673 mm)	34" (864 mm)	65.5" (1664 mm)	984 lbs (445 kg)
	110 amps @ 400 VAC, 50 Hz	115/200 VAC, 400 Hz, 90 kVA				

FROM DESIGN TO DEPLOYMENT

270 VDC / 400 Hz Dual Output Converter
Unit Specifications

INPUT POWER
- Rated current: 94 amps ±15% @ 480 VAC, 60 Hz

OUTPUT-270 VDC:
- 270 VDC @ 259 Adc - 72 kW
- 28 VDC @ 15 Adc - Interlock
- Voltage regulation: ±3 VDC
- Transient performance exceeds MIL-STD-704F
- Recovery from 95% Step Load in 40 ms to 704F requirements and 80 ms to recover to DC regulation
- Meets F-35 JSF power quality requirements for Pulse Loads.
- Overload Rating:
  - Limits total current between 460 – 490 Adc for 2s
  - 125% for 6 seconds
  - 150% for 3 seconds

OUTPUT-400 HZ:
- Power: 90 kVA @ 0.8 pf Lag
- 115/200 V – WYE, ABC-N
- Frequency: 400 Hz ± 0.1%
- Power factor: 0.5 lag to 0.9 lead
- Voltage regulation: <1%
- Transient performance exceeds MIL-STD-704F
- Crest factor: 1.414 ±3%
- Overload Rating:
  - 110% for 60 minutes
  - 125% for 5 minutes
  - 150% for 2 minutes
  - 200% for 20 seconds
  - 300% for 6 seconds

EFFICIENCY
- 12 pulse Front End
- Overall efficiency:
  >0,93 at 35-90 kVA load
  >0,90 at 25 kVA load
- No load loss: <2 kW

PROTECTION
- Over/under voltage: Input and Output
- Overload
- Short circuit
- High temperature
- Internal system error

ENVIRONMENTAL
- Operating temperature: -40˚C to +55˚C
- Relative humidity 0—95%
- Airborne Noise <65 dba @ 1m - typically 60 dba

MISCELLANEOUS
- MTBF: 100,000 hours
- MTTR: max. 20 minutes

STANDARDS
- ETL Listed
- UFGS-26 35 43 Unified Guide Specification
- MIL-STD-704F
- F-35 Ground Electrical Power Interface Document 2ZEU00004-0007

EMI
MIL-STD-461E:

CE102 Conducted Emissions, Power Leads, 10 kHz to 10 MHz

CS101 Conducted Susceptibility, Power Leads, 30 Hz to 150 kHz

CS114 Conducted Susceptibility, Bulk Current Injection, 10 kHz to 200 MHz

CS115 Conducted Susceptibility, Bulk Cable Injection, Impulse Excitation

CS116 Conducted Susceptibility, Damped Sinusoidal Transients, Cables and Power Leads, 10 kHz to 100 MHz, 10A max for all configurations

RE102 Radiated Emissions, Electrical Field, 10 kHz to 1 GHz

RS103 Radiated Susceptibility, Electric Field, 2 MHz to 18 GHz

OPTIONS
- Remote Control Box
- 18” Floor Stand

Specifications subject to change without notice.

This combination unit is compatible with these aircraft and others:

F-15 Eagle

F-16 Falcon

F-18 Hornet

Mirage

F-22A Raptor

JSF F-35

ITW MILITARY GSE

Headquarters & Factory: 11001 US Hwy. 41 North, Palmetto, FL 34221 U.S.A.
Phone: 941.721.1003; 941.721.1006 • Fax: 941.723.3582; 941.531.5876
E-mail: sales@itwmilitarygse.com • www.itwmilitarygse.com

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FROM DESIGN TO DEPLOYMENT