270 VDC Power Supply

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PERFORMANCE FEATURES

Proven design:

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

F-22A Raptor

JSF F-35

THE ADVANTAGES

- NFPA 70 Article 500 Class 1 Div. 2 compliant with 18" Floor Stand
- Trailer mounted units are compliant with SAE AS8090 Type 1 Class 2 requirements.
- Easy-to-read Digital Information Display
- Modular design allows for ease of maintenance
- BIT: Digital diagnostics aid troubleshooting

Our 270 VDC Power Supply provides a complete fully integrated and tested system which is ready to install as delivered. Front access for all service and maintenance functions. 30-40% space and weight savings compared with competitive products. The compact light weight adaptable design allows flexible installation options. It can be floor mounted, overhead mounted or mounted on a trailer or castors.

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

NSF
Registered to AS9100 (with ISO 9001)

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.

Model	Input Power	Output Power	Length	Width	Height	Weight
270 VDC Power Supply	400/480 VAC, 50/60 Hz, 110/94 amps	270 VDC , 269Adc, 72 kW	26.5" (673 mm)	34" (864 mm)	65.5" (1664 mm)	984 lbs (445 kg)

270 VDC Power Supply Unit Specifications

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

OUTPUT
- 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

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
- No break power transfer
- 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 (Proven): 100,000 hours
- MTTR: max. 20 minutes

STANDARDS
- MIL-STD-704F Aircraft electric power characteristics
- Mil-STD-1399-300 Interface Standard for Shipboard Systems
- Mil-STD-1472F Human Engineering
- UFGS-26 35 43 Unified Guide Specification
- BS 2G 219 General Requirements for Ground Support Equipment
- ETL Listed

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
- 270 VDC @ 30 Adc – 8.1 kW FTI
- External Emergency Stop
- Remote Control Box
- 6 pulse Front End
- 18” Floor Stand
- Trailer per SAE AS8090
- Auxiliary Power Outlets, 60 Hz
- Door/Panel Interlock
- Portable Service Lamp
- 415 VAC/50 Hz Input

Specifications subject to change without notice.

The 270 VDC Power Supply is compatible with these aircraft and others:

F-22A Raptor

N-UCAS; UAVs

JSF F-35

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FROM DESIGN TO DEPLOYMENT