

PSPFC-Mil 2400 AC/DC is a compact DC power supply with nominal output of 28V/80A. It is a mechanically and electrically rugged unit capable of operating under harsh environmental conditions with large input voltage variations. It is a high efficiency unit designed to supply power to sensitive electronics.



The PSPFC-Mil 2400 AC/DC input current is power factor corrected and designed for optimum utilization of weak power sources such as portable generators. The efficiency is very high due to soft switching technology. The PSPFC-Mil can operate stand alone or be mounted in 19" rack systems that occupies 2U (88.9mm/3.5") height.

The signal connectors provides several signals: Alarm relay outputs and a bus for interconnection of multiple units in a redundant or parallel system. The unit is protected from over voltage, short circuit, over current and over temperature. The over voltage, over temperature and input voltage faults are latching and the unit does not restart before the input voltage is cycled.

The unit is software-upgradeable and can be configured according to customer specification.

Functions

Over temperature	The unit is protected from over temperature. The unit derates to 65A at an ambient temperature of 66 °C, and shuts down at an ambient temperature of 78 °C, free standing unit. The unit automatically starts up again when the temperature drops.
Input circuit breaker	The input circuit breaker releases if the input current exceeds 35A and the unit shuts off.
Alarms	Status signals are fed to separate potential free outputs, and are indicated in separate LEDs for: Power OK Unit failure Current limit
Display	The display can be toggled between output voltage and output current
Input voltage	If the input voltage drops below 99V, the unit will shut down. If the input voltage increases to 105V or more, the unit will automatically start up again
Connectors	AC input: 97B-3102E-16-10P DC output: 97B-3102E-22-22S Alarm 1: Binder 09-0404-30-02 Alarm 2: Binder 09-0412-30-04 PAR/COM: 2 pcs. Binder 09-0416-30-05
Grounding	Available in front
Acoustic noise	At ambient temperatures below 29 °C the acoustic noise is 45 dBA.
Frequency range	45 - 420Hz
Cooling	Forced air by speed controlled fan

PSPFC-Mil 2400 AC/DC

Power supply

SPECIFICATION

Electrical data at 50Hz input voltage

Input voltage	99 – 264 VAC
Power Factor (PF)	> 0.95 (typical 0.99)
Input current at max load and 50Hz	28A @ 99VAC 24A @ 115VAC 12A @ 230VAC
Total Harmonic Distortion (THD) at full load and 50Hz	<6%
Efficiency at full load	> 88% @ 115 VAC > 90% @ 230 VAC
Nominal output voltage	Fixed 28 VDC
Nominal output current	80A
Load sharing	Less than 10% deviation with 2 - 10 units in parallel
Output voltage ripple and noise	<100mV p-p, 20MHz bandwidth
Output voltage regulation	<1,5% zero/max load
Short circuit current	≤88.0 Amps
OVP level	31.4V

EMC

Electromagnetic Interference
The power supply meets the requirements of MIL-STD-461E; Ground Army; CE101, CE102, RE101 RE102, RS103, CS101, CS114, CS115 and CS116

Electrical system in Vehicles
MIL-STD-1275D

Aircraft Electric Power Characteristics
MIL-STD-704 (partly)

Electrical Characteristics of Generating Sets
STANAG 4135 (partly)

IEC Standard Voltages
IEC600038

Electrostatic discharge
The power supply meets the requirements of MIL-STD-1686 for ESD

Safety
EN 60950

Environmental

High temperature
Operation
MIL-STD-810G, Method 501.5, Procedure II , 60°C
Storage
MIL-STD-810G, Method 501.5, Procedure I, 71°C

Low temperature
Operation
MIL-STD-810G, Method 502.5, Procedure II, -40°C
Storage
MIL-STD-810G, Method 502.5, Procedure I, -51°C

Temperature shock
MIL-STD-810G, Method 503.5, -51°C - +71°C.
(Non-operational)

Humidity
MIL-STD-810G, Method 507.5, Procedure II

Vibration
MIL-STD-810G, Method 514.6C Table 514.6C-VI.
Composite wheeled vehicle vibration exposures figure 514.6C-3

Shock
MIL-STD-810G, Method 516.6, Procedure I,
functional shock, 15g 11ms

Fungus
Analysis of the degree of inertness to fungus growth of the components in accordance with MIL-HDBK-454

Altitude
MIL-STD-810G, Method 500.5, Procedure I (Storage) and II (Operational) Test altitude is 4750m(15000ft) at 57.2Kpa for Operational and 12195m (40000ft.) at 18.8Kpa. for Storage

Encapsulation
IP67

Mechanical data

Dimensions:	
Width	220mm, 8.66"
Depth in rack	390mm, 15.35"
Depth total	420mm, 16.54"
Height	88mm, 3.5" (2U)
Weight	11.1kg, (24.5lbs)
Mounting:	Any direction and in 19" rack