

PSBC-Mil 2400 AC/DC Power Supply / Charger

Description

PSBC-Mil 2400 AC/DC is a compact DC power supply and battery charger 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, with or without backup battery.

The PSBC-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 unit can operate stand alone or be mounted in 19" rack systems that occupies 2U (88.9mm/3.5") height.

The PSBC-Mil 2400 AC/DC has an RS485 port that can be used for control, monitoring and setup. Detailed status and statistics can be retrieved over this port.

The signal connectors provide several signals: Alarm relay outputs, external battery temperature sensing and a bus for interconnecting multiple units in a redundant or parallel system. PSBC-Mil 2400 AC/DC can be configured to charge different battery technologies such as LI-Ion, NiMH, NiCd and Lead acid.

The unit is software-upgradeable for future battery technologies. Temperature compensated charging ensures full battery capacity over entire temperature range.

The unit is protected from over voltage, short circuit, over current and over temperature. PSBC-Mil 2400 AC/DC can be software 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 30A 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 alarm Current limit
Display	The display can be toggled between output voltage and output current
Input voltage	When the input voltage is below the safe operating range, the converter is shut off. When the voltage returns, the converter is turned on again.
Connectors	AC input: 97B-3102E-16-10P (Bayonet) DC output: 97B-3102E-22-22S (Bayonet) Alarm 1: Binder 09-0404-30-02 Alarm 2: Binder 09-0412-30-04 NTC/PAR/COM: 2 pieces. Binder 09-0416-30-05
Grounding	Available in front
Acoustic noise	At ambient temperatures below 45°C the acoustic noise is 45 dBA.
Frequency range	45 - 430Hz
Cooling	Forced air by temperature controlled fan

Specifications (Specifications Subject to Change Without Notice)

Electrical data at 50Hz input voltage

Input voltage	99 – 264 VAC
Power Factor (PF)	Typical 0.99 @ full load
Input current at max load and 50Hz	28A @ 99 VAC 24A @ 115 VAC 12A @ 230 VAC
Total Harmonic Distortion (THD) @ 28V 80A, 230V 50Hz	<6%
Efficiency at full load	> 88% @ 115 VAC > 90% @ 230 VAC
Nominal output voltage	28 VDC
Adjustable output voltage	20.0 - 34.0 VDC
Nominal output current	80A
Adjustable current limit	5 – 80 Amps
Short circuit current	≤88.0 Amps
Load sharing	Max 3 Amps deviation
Output voltage ripple and noise	<100mV p-p, 20MHz bandwidth
Output voltage regulation	<1.5% zero/max load

Standards

Electromagnetic Interference

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

Electrical systems in vehicles
MIL-STD-1275D

Electrostatic discharge

The power supply meets the requirements of EN 61000-4-2 for ESD

Safety

Designed to meet EN 60950

Encapsulation

IP67

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 .

MIL-STD-801G, Method 514.6D, Ground Vehicle Category 20, Wheeled/Tracked/Trailer, Procedure I/III

Shock

MIL-STD-810G, Method 516.6, Procedure I, functional Shock, 40g 11ms

Fungus

Analysis of the degree of inertness to fungus growth of the components in accordance with

MIL-HDBK-454

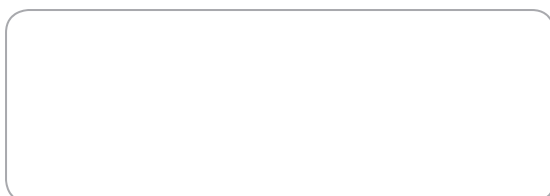
Altitude

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.

Mechanical Specifications

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

Available from:



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The power conversion company

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