



ComPact 2400 AC/DC Power Supply and Battery Charger

Description

ComPact 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 ComPact 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 ComPact 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, external battery temperature sensing and a bus for interconnection of multiple units in a redundant or parallel system. ComPact 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. ComPact 2400 AC/DC can be software configured according to customer specification.

Functions	
Over temperature	The unit is protected from over temperature. The unit shuts down at an ambient temperature of 80°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 15A 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: 3102E-16-10P (Threaded) DC output: 3102E-22-2S (Threaded) 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

ComPact 2400 AC/DC

Specification

Electrical data at 50Hz input voltage		Environmental	
Input voltage	99 – 276VAC	High temperature	
Power Factor (PF)	Typical 0.99 @ full load	<u>Operation</u>	
Input current at max load and 50Hz	28A @ 99VAC 24A @ 115VAC 12A @ 230VAC	MIL-STD-810G: Method 501.5, Procedure II, 60°C	
Total Harmonic Distortion (THD) @ 28V 80A, 230V 50Hz	<6%	<u>Storage</u>	
Efficiency at full load	> 88% @ 115VAC > 90% @ 230VAC	MIL-STD-810G: Method 501.5, Procedure I, 71°C	
Nominal output voltage	28 VDC	Low temperature	
Adjustable output voltage	20.0 - 30.7VDC	<u>Operation</u>	
Nominal output current	80A	MIL-STD-810G: Method 502.5, Procedure II, - 40°C	
Adjustable current limit	5 – 80 Amps	<u>Storage</u>	
Short circuit current	≤88.0 Amps	MIL-STD-810G: Method 502.5, Procedure I, -51°C	
Load sharing	Max 3 Amps deviation	Temperature shock	
Output voltage ripple and noise	<100mV p-p, 20MHz bandwidth	MIL-STD-810G: Method 503.5, -51°C - +71°C. (Non-operational)	
Output voltage regulation	<1.5% zero/max load	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 Catagory 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.	
Standards		Mechanical Data	
Electromagnetic Interference		Dimensions:	
The power supply meets the requirements of MIL-STD-461E and F; Ground Army; CE101, CE102, RE101 RE102, RS103, CS101, CS114, CS115 and CS116		Width 220mm, 8.66"	
Electrical systems in vehicles MIL-STD-1275D		Depth in rack 390mm, 15.35"	
Electrostatic discharge		Depth total 420mm, 16.54"	
The power supply meets the requirements of EN 61000-4-2 for ESD		Height 88mm, 3.5" (2U)	
Safety		Weight 11.1kg, (24.5lbs)	
Designed to meet EN 60950		Mounting: Any direction and in 19" rack	
Encapsulation			
IP67			
Product	Part No.	NSN	
Compact 2400 AC/DC	P600360	6130-25-160-4350	