

ComPact 2400 AC/DC PS

Input: 115/230 VAC, 50/60/400 Hz
 Output: 28 VDC, 80 A, 2400 W
 OVP: 31.4V (MIL-STD 704F)
 Part number: P600370
 NSN: 6130-25-160-8484

ComPact family summary

PFC
 RS-485 bus
 Active load sharing
 Battery temperature compensated charging
 Stand alone or mounted in 19" rack
 Alarm relay outputs
 RoHS compliant
 IP67



Description

The input current of ComPact 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. ComPact can operate stand alone or be mounted in 19" rack system.

The RS-485 bus can be used for control, monitoring and setup. Detailed status and statistics can be retrieved. The bus is also used for interconnecting multiple units in a redundant or parallel system. The signal connectors provide several signals in addition to the RS485 bus: alarm relay outputs and input for battery temperature sensor. Temperature compensated charging ensures full battery capacity over the entire temperature range. ComPact can be configured to charge different battery technologies such as Li-Ion, LiPo, lithium iron phosphate and lead-acid. ComPact can be software configured according to customer specification. The firmware is user upgradeable for future battery technologies and facilities. ComPact is protected from overvoltage, overcurrent, short circuit, reversed polarity and over temperature.

Functions

Over temperature	The unit is protected from over temperature by derating the output current. It shuts down if the temperature continues to rise.
Input circuit breaker	The input circuit breaker is for failure protection and is also used as ON/OFF switch.
Alarms	Status signals are fed to separate potential free outputs, and are indicated in separate LEDs.
Display	The display can be toggled between output voltage, output current and alarm/error codes.
Input voltage	When the input voltage is below the safe operating range, the converter is shut off.
Connectors	AC input: 97B-3102E-16-10P-PCC-622 Amphenol or similar DC output: 97B-3102E-22-22S-622 Amphenol or similar Alarm 1: Binder 09-0404-30-02 Alarm 2: Binder 09-0412-30-04 NTC/COM: 2 pieces. Binder 09-0416-30-05
Grounding	Available in the front and back
Acoustic noise	At ambient temperature below 45°C the acoustic noise is 45 dBA.
Frequency	45-430 Hz
Cooling	Forced air by temperature controlled fan

Patented

ComPact 2400 AC/DC PS

Specifications

Electrical data	
Input voltage	99—276 VAC
Power Factor, -load: ≥ 50 %, Vin: 50/60 Hz	Typical: 0.99
Input current -Load: 2400 W -Vin: 50/60 Hz	Vin: 99 VAC ≤ 28 A Vin: 120 VAC ≤ 23 A Vin: 230 VAC ≤ 12 A
Total Harmonic Distortion -Load: 28 VDC, 80 A -Vin: 115/230 VAC, 50/60 Hz	≤ 6%
Efficiency -Load: 28 VDC, 80 A	Vin: 120 VAC ≥ 88% Vin: 230 VAC ≥ 90%
Default output voltage	28.0 VDC
Adjustable output voltage	5—30.7 VDC
Overvoltage protection (OVP)	31.4 V
Default output current limit	83 A
Adjustable current limit	5—83 A
Short circuit current	≤ setting of current limiter +1 A
Load sharing	≤ 2 A deviation
Output voltage ripple and noise -Bandwidth: 20MHz	≤ 100 mVp-p
Load regulation	Typical: 70 mV
Line regulation	Negligible
Safety	CE marked

The protection features are by default latching and the unit does not restart before the input voltage is cycled.

EMC

Electromagnetic Interference

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

Electrical systems in vehicles

The power supply meets the requirements MIL-STD-1275D for: Importet voltage surge 40 V and 100 V and ripple 14 V.

Electrostatic discharge

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

Environmental

High temperature

Operational

MIL-STD-810G: Method 501.5, Procedure II, +60 °C

Storage

MIL-STD-810G: Method 501.5, Procedure I, +71 °C

Low temperature

Operational

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—+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-810G: Method 514.6D, Category 20, Ground Vehicles, Wheeled/Tracked/Trailer, Procedure I

Shock

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

Fungus

MIL-HDBK-454: Analysis of the degree of inertness to fungus growth of the components

Salt Fog

MIL-STD 810G: Method 509.5, 24 h spray, 24 h dry, 2 times

Altitude

Operational

MIL-STD-810G: Method 500.5, Procedure II, 4572 m (15000 ft) at 57.2 kPa

Storage

MIL-STD-810G: Method 500.5, Procedure I, 12192 m (40000 ft) at 18.8 kPa

Encapsulation

The power supply is designed to meet the requirements of IP67 and has been tested by immersion in 1 m water for 30 minutes .

Weight and dimensions

Width	220 mm, 8.66"
Depth in rack	390 mm, 15.35"
Depth total	420 mm, 16.54"
Height	88 mm, 3.5" (2U)
Weight	11.1 kg, (24.5 lbs)

Patent Pending