ComPact 2400-48 AC/DC

Power Supply and Battery Charger

ComPact 2400-48 AC/DC

Input: 120/230 VAC, 50/60/400 Hz
Output: 20-65 VDC, 40 A, 2400 W

Part No.	NSN	Description
P600610	5340-25-163-6645	ComPact 2400/48 AC/DC, 4-pin output

ComPact family summary

MIL-STD-810G, MIL-STD-461G
Power Factor Correction (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 RS-485 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. The unit automatically starts up again when the temperature drops.
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. When the voltage returns, the converter is turned on again.
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
Acoustic noise	At ambient temperature below 45°C the acoustic noise is 45 dBA.
Frequency range	45-430 Hz
Cooling	Forced air by temperature controlled fan

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Specifications

Electrical

AC Input		
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 Vin: 120 VAC Vin: 230 VAC	≤ 29 A ≤ 23 A ≤ 12 A
Total Harmonic Distortion -Load: 2400 W, Vin: 50/60 Hz		≤ 6%
Efficiency -Load: 56 VDC, 40 A	Vin: 120 VAC Vin: 230 VAC	≥ 88% ≥ 90%
DC Output		
Default output voltage		48.0 VDC
Adjustable output voltage		20—65 VDC
Default output current limit		42 A
Adjustable current limit		3—42 A
Short circuit current		≤ setting of current limiter +1 A
Load sharing		≤ 2 A deviation
Output voltage ripple and noise -Bandwidth: 20MHz		≤ 300 mVp-p
Load regulation		Typical: 50 mV
Line regulation		Negligible
Safety		CE marked

EMC (fully qualified unless stated)

Electromagnetic Interference (designed to meet)
Designed to meet MIL-STD-461G:
CE101, CE102, RE101, RE102, RS103, CS101, CS114, CS115, CS116 and CS118

Electrostatic discharge
EN 61000-4-2:
ESD

Environmental (fully qualified unless stated)

High temperature (designed to meet)
Operational
MIL-STD-810G: Method 501.5, Procedure II, +60 °C
Storage
MIL-STD-810G: Method 501.5, Procedure I, +71 °C

Low temperature (designed to meet)
Operational
MIL-STD-810G: Method 502.5, Procedure II, -40 °C
Storage
MIL-STD-810G: Method 502.5, Procedure I, -51 °C

Temperature shock (designed to meet)
MIL-STD-810G: Method 503.5, -51—+71 °C, non-operational

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

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, 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 (designed to meet)
Operational
MIL-STD-810G: Method 500.6, Procedure II, 4572 m (15000 ft) at 57.2 kPa
Storage
MIL-STD-810G: Method 500.6, Procedure I, 12192 m (40000 ft) at 18.8 kPa

Encapsulation
IP67: Immersion in 1 m water for 30 minutes .

Mechanical

Enclosure	Die cast and machined aluminum.
Surface finish	Paint finish. Surface finish consistent with die casting.
Width Depth in rack Depth total Height Weight	220 mm, 8.66“ 390 mm, 15.35“ 420 mm, 16.54“ 88 mm, 3.5“, 2U 11.1 kg, 24.5 lbs

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