

ComPact 2400-48 AC/DC

Input: 120/230 VAC, 50/60/400 Hz

Output: 20-65 VDC, 40 A, 2400 W

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.

Part No.	NSN	Description
P600610	5340-25-163-6645	ComPact 2400/48 AC/DC, 4-pin output
P600612	TBC	ComPact 2400/48 AC/DC, 3-pin output



4-Pin DC output connector version shown

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: 4-Pin: 97B-3102E-22-22S-622 Amphenol or similar 3-Pin: 97B-3102E-22-2S-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

Patented

ComPact 2400-48 AC/DC

Specifications

Electrical

AC Input

Input voltage	99—276 VAC
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Power Factor -load: $\geq 50\%$, Vin: 50/60 Hz	Typical: 0.99
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Input current	Vin: 99 VAC	$\leq 29\text{ A}$
-Load: 2400 W	Vin: 120 VAC	$\leq 23\text{ A}$
-Vin: 50/60 Hz	Vin: 230 VAC	$\leq 12\text{ A}$

Total Harmonic Distortion -Load: 2400 W, Vin: 50/60 Hz	$\leq 6\%$
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Efficiency	Vin: 120 VAC	$\geq 88\%$
-Load: 56 VDC, 40 A	Vin: 230 VAC	$\geq 90\%$

DC Output

Default output voltage	48.0 VDC
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Adjustable output voltage	20—65 VDC
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Default output current limit	42 A
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Adjustable current limit	3—42 A
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Short circuit current	\leq setting of current limiter +1 A
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Load sharing	$\leq 2\text{ A}$ deviation
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Output voltage ripple and noise -Bandwidth: 20MHz	$\leq 300\text{ mVp-p}$
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Load regulation	Typical: 50 mV
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Line regulation	Negligible
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Safety	CE marked
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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 .

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

Package Contents

ComPact Power Supply, Information Sheet, Test Certificate.

Mechanical

Enclosure	Die cast and machined aluminum.
Surface finish	Paint finish. Surface finish consistent with die casting.
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

Patented