ComPact 2000 DC/AC

2000VA DC/AC Inverter

Summary

- Input: 18-34 VDC
- Output: 120/230 VAC pure sine, 60/50 Hz, 2000VA
- RS-485 and CAN J1939 bus
- Active load sharing
- Stand alone or mounted in 19" rack
- Relay alarm outputs
- IP67
- Order number: P600430
- NSN: TBD

Description

The ComPact 2000 DC/AC Inverter offers pure sine output at very high efficiency and can operate stand alone or be mounted in 19'' rack system. The RS-485/CAN bus can be used for control, monitoring and setup. Detailed status and statistics can be retrieved. The bus is available on the signal connectors and is used for interconnecting multiple units in a redundant or parallel system. The signal connectors also provide alarm relay outputs. The ComPact 2000 DC/AC can be software configured according to customer specification. The firmware is user upgradeable. The ComPact 2000 DC/AC is protected from overvoltage, overcurrent, short circuit, reversed input 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.
Alarms	Status signals are fed to separate potential free outputs, and are indicated in separate LEDs for: Power OK Unit alarm Overload
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	DC input negative: Allied Electronics Corporation MG 02R 20-2P-SQF 36 126 LT-003E-RT. Bayonet, RoHS DC input positive: Allied Electronics Corporation MG 02R 20-2P-SQF 36 123 LT-003E-RT. Bayonet, RoHS AC output: 97B-3102E-16-10S or equivalent. Bayonet, RoHS Alarm 1: Binder 09-0404-30-02 Alarm 2: Binder 09-0412-30-04 COM (2 pieces:) Binder 09-0416-30-05
Grounding	Available in the front and back
Acoustic noise	At ambient temperatures below 45°C the acoustic noise is 45 dBA.
Cooling	Forced air by temperature controlled fan

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Specification

Electrical data

DC input voltage		2000W: 20-34 VDC 1800W: 18-34 VDC 1600W: 16-34 VDC
DC input current –Load: 2000 W @ PF > 0.95	Vin: 20 VDC Vin: 34 VDC	≤ 115 A ≤ 68 A
Efficiency —Input: 28 VDC	Vout: 120 VAC Vout: 230 VAC	≥ 88 % ≥ 90 %
Default output voltage		230 VAC, 50 Hz
Adjustable output voltage		200-240 VAC, 50 Hz 100-120 VAC , 60 Hz
Output current limit	Vout: 120 VAC Vout: 230 VAC	9 A 9 A
Adjustable output current limit	Vout: 120 VAC Vout: 230 VAC	9 A 9 A
Frequency		50/60 Hz ±0.1 Hz
Overload		105-115 %, 120 sec 115-150 %, 10 sec Shut down, re-power to recover
Short circuit current		≤ selected current limit +70 % Shut down, re-power to recover
Load sharing		≤ 2 A deviation
Total Harmonic Distortion - 2000W @ PF > 0.95	115 VAC, 60 Hz 230 VAC, 50 Hz	≤ 3 % ≤ 3 %
Output voltage ripple and noise - Bandwidth: 20MHz		≤ 2 Vp-p
Load regulation		±3 %
Line regulation		Negligible
Safety		CE marked

EMC

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

Electrical systems in vehicles
The power supply meets the requirements of MIL-STD-1275E.

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, operational

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	132 mm, 5.25“ (3U)
Weight	16 kg (36,8 lbs)