

Summary

- Input: 16-34 VDC
- Output: 50-350 VDC, 2000 W
- RS-485 bus
(CAN bus available with future firmware upgrade)
- Stand alone or mounted in 19" rack
- Relay alarm outputs
- RoHS compliant
- IP67
- Order number: P600650
- NSN: 6130-25-163-3393



Description

The ComPact 2000 DC/DC offers clean 270 VDC 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 (CAN bus available with future firmware upgrade). Detailed status and statistics can be retrieved. The bus is available on the signal connectors. The signal connectors also provide alarm relay outputs. The ComPact 2000 DC/DC can be software configured according to customer specification. The firmware is user upgradeable. The ComPact 2000 DC/DC is protected from overvoltage, overcurrent, short circuit, reversed input polarity and over temperature.

Functions

| | |
|-------------------------|--|
| Over temperature | The unit is protected from over temperature by shutting down. 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: Positive: Bayonet, Allied Electronics Corporation MGR 02R 20-2P SQF 36 123 LT 101E RT Negative: Bayonet, Allied Electronics Corporation MGR 02R 20-2P SQF 36 126 LT 101E RT DC output: Bayonet, Allied Electronics Corporation MG 02R 16-10SX PMC-C-AG 101E NS2 or equivalent. REL 1/REL 2: Binder 09-0412-30-04 Control: Binder 09-0408-30-03 REM/COM 1/2: Binder 09-0416-30-05 (x2) |
| Grounding | Available in the front and back |
| Acoustic noise | At ambient temperatures below 45°C the acoustic noise is below 45 dBA. |
| Cooling | Forced air by temperature controlled fan |

ComPact 2000 DC/DC Inverter

Specification

| Electrical data | | |
|---|----------------------------|-----------------------------------|
| DC input voltage range | | 16-34 VDC |
| DC input current —Load: 2000 W | Vin: 20 VDC Vin: 34 VDC | ≤ 115 A ≤ 68 A |
| Efficiency —Input: 28 VDC | Vout: 270 VDC | ≥ 90 % |
| Maximum continuous output power : | | |
| DC input ≥ 20VDC | | 2000W |
| DC input ≥ 18VDC | | 1800W |
| DC input ≥ 16VDC | | 1600W |
| Default output voltage | | 270 VDC |
| Adjustable output voltage | | 50-350 VDC |
| Default output current limit | | 7.5 A |
| Adjustable output current limit | | 2-7.5 A |
| Short circuit current | | ≤ setting of current limiter +1 A |
| 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-461G: CE102, RE101, RE102, RS103, CS101, CS114, CS115, CS116, CS118 |
| 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 | |
| <u>Operational</u> | MIL-STD-810G: Method 501.5, Procedure II, +50 °C Operation at higher ambient will result in reduced power output |
| <u>Storage</u> | MIL-STD-810G: Method 501.5, Procedure I, +71 °C |
| Low temperature | |
| <u>Operational</u> | MIL-STD-810G: Method 502.5, Procedure II, -40 °C |
| <u>Storage</u> | 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 | |
| <u>Operational</u> | MIL-STD-810G: Method 500.5, Procedure II, 4572 m (15000 ft) at 57.2 kPa |
| <u>Storage</u> | 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 | |
|-----------------------|---|
| 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 | 132 mm, 5.25" (3U) |
| Weight | 16 kg (36,8 lbs) |