# ComPact 1800 DC/DC

DC/DC converter and battery charger

**ComPact 1800 DC/DC is a compact DC/DC converter and battery charger with nominal output of 28V/60A. It is a mechanically and electrically rugged unit capable of operating in a harsh environment with large input voltage variations. It is a high efficiency unit designed to supply power to sensitive electronics, with or without backup battery.**


The ComPact 1800 DC/DC can operate stand alone, or can be mounted in 19" rack systems that occupies 2U (88.9mm/3.5") height.
The I/O and SNMP bus provides several signals: Alarm relay outputs, external battery temperature sensing and a bus for interconnection of multiple units in a redundant or parallel system. ComPact 1800 DC/DC can be configured to charge battery technologies such as LI-Ion, NiMH, NiCd and Lead acid. The unit is software-upgradeable for future battery technologies. Temperature compensated charging ensures full battery capacity over entire temperature range. The internal temperature sensors control the fans' speed continuously. The unit is protected from over voltage, short circuit, over current, and over temperature. ComPact 1800 DC/DC can be adjusted according to customer specification.

## Functions

| | |
|---|---|
| **Under voltage** | An alarm is activated if the output voltage drops below 20V. The alarm disappears when the voltage rises higher than 21.5V. |
| **Over voltage** | An alarm is activated if the output voltage exceeds 33.3±1V . |
| **Over temperature** | The unit is protected from over temperature. |
| **Alarms** | Alarm signals are fed to a common potential free output, and are indicated in separate LEDs for:<br>Power OK<br>Unit failure<br>Current limit |
| **Input voltage** | When the input voltage is outside the safe operating range, the converter is shut off. When the voltage returns, the converter is turned on again. |
| **Connectors** | Input: MS3102E22-22P<br>Output: MS3102E22-22S<br>Mon, Par/NTC and Par: Binder 09-0482-00-08 |
| **Grounding** | Available in front (M5) |
| **Acoustic noise** | Max. 55 dBa |



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# ComPact 1800 DC/DC Power supply

## SPECIFICATION

### Electrical data

| | |
|---|---|
| Input voltage | 18-32 VDC (Derated power at low input voltage) |
| Input current at max load | 74A @ 27VDC<br>90A @ 18VDC |
| Efficiency at full load | > 90% |
| Nominal output voltage | 28 VDC<br>(adjustable 21.5 – 30,0 VDC) |
| Nominal output current | 60A |
| Load sharing | Less then 10% deviation with 2 - 10 units in parallel |
| Output voltage ripple and noise | <100mV p-p, 20MHz bandwidth |
| Output voltage regulation | 1,5% zero/max load |
| Adjustable current limit | 5 – 60 Amps |
| Short circuit current | ≤66.0 Amps |

### EMC

**Electromagnetic Interference**
The power supply meets the requirements of MIL-STD-461E; Ground Army; CE101, CE102, RE102, RS103, CS101, CS114 and CS116

**Electrostatic discharge**
The power supply meets the requirements of MIL-STD-1686 for ESD

**Safety**
EN 60950

**Encapsulation**
IP67

**Cooling**
Forced air by speed controlled fan

### Environmental

**High temperature**
Operation
MIL-STD-810E: Method 501.3, Procedure II to 65ºC
Storage
MIL-STD-810E: Method 501.3, Category A1,hot induced, 71ºC

**Low temperature**
Operation
MIL-STD-810E: Method 502.3, Procedure II, - 40ºC
Storage
MIL-STD-810E: Method 502.3, Procedure I, -51ºC

**Temperature shock**
MIL-STD-810E: Method 503.3, -51ºC - +71ºC. (Non-operational)

**Humidity**
The power supply operates as specified when exposed to high humidity as per MIL-STD-810E, Method 507.3

**Vibration**
According to MIL-STD-810F, change note 3. Table 514.5C-VII. Composite wheeled vehicle vibration exposures figure 514.5C-3

**Shock**
MIL-STD-810E. Method 516.4, Procedure I, functional Shock, 15g 11ms

**Fungus**
Analysis of the degree of inertness to fungus growth of the components in accordance with MIL-HDBK-454

**Altitude**
Designed to meet MIL-STD-810E: Method 500.3, Procedure I (Storage), II (Operational), and III (Rapid decompression), Test altitude is 4750 metres at 57.2Kpa for all tests, except storage. Storage 12195m (40000ft.).

### Mechanical data

| | |
|---|---|
| Dimensions W x D x H incl. handles | 220 x 400 x 88mm (2U)<br>(8.66 x 15.75 x 3.5") |
| Weight | 8.5kg (25.4lbs) |
| Cabinet | Standard 19" rack |



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