

Description

ComPact 1200 Dual Input is a compact DC power supply and battery charger with nominal output of 28V/40A. Its dual input capability enables the unit to seamlessly switch between AC and 12V DC power sources, all while maintaining ideal operating condition for 24V equipment or batteries.

ComPact 1200 Dual Input is mechanically and electrically built to safely operate from AC and DC power sources with large voltage fluctuations under harsh environmental conditions. It is a high efficiency unit designed to supply power to sensitive electronics, with or without a 24V backup battery.

The AC input current is power factor corrected and designed for optimum utilisation of poor quality power sources such as portable generators. Its 12V input additionally allows it to operate from 12V vehicle power, the dominant power source amongst many armed forces today.

The switching between power sources is automatic and seamless. When powered from an AC source the ComPact 1200 Dual Input additionally will charge any 12V vehicle battery connected to its input, and thus prevent self-discharge and resulting vehicle failure during extended deployments. The ComPact 1200 Dual Input has an RS485 port that can be used for control, monitoring and setup. Detailed status and statistics can be retrieved over this port. The signal connectors provides access to alarm relay outputs, external battery temperature sensing and a bus for interconnection of multiple units in a redundant or parallel system. The ComPact 1200 Dual Input is fully software programmable and can easily be configured to charge different battery technologies. The unit features temperature compensated charging with individual sensors for both the 24V output and the 12V input/output. This ensures full battery capacity over the entire temperature range. The ComPact 1200 Dual Input is protected from over voltage, over current, short circuit, reversed polarity and over temperature. The firmware in the unit is upgradeable for future battery technologies and can be configured according to customer specification.



Functions

AC Input circuit breaker	The input circuit breaker releases if the input current exceeds 30A, in which case the ComPact 1200 Dual Input will swap to the 12V DC source.								
Alarms	Status signals are fed to separate potential free outputs, and are indicated in separate LEDs for: <table border="0" style="width: 100%;"> <tr> <td style="width: 50%;">AC and 24 volt DC unit</td> <td style="width: 50%;">12 volt DC unit</td> </tr> <tr> <td>Power OK</td> <td>Power OK</td> </tr> <tr> <td>Unit alarm</td> <td>Unit alarm</td> </tr> <tr> <td>Current limit</td> <td>12 V Charge</td> </tr> </table>	AC and 24 volt DC unit	12 volt DC unit	Power OK	Power OK	Unit alarm	Unit alarm	Current limit	12 V Charge
AC and 24 volt DC unit	12 volt DC unit								
Power OK	Power OK								
Unit alarm	Unit alarm								
Current limit	12 V Charge								
Display	The display can be toggled between output voltage and output current.								
AC & DC Input voltage	When the AC voltage is below the safe operating range, the ComPact 1200 Dual Input will swap to the 12V DC source. When the AC input voltage returns to a safe level, the ComPact 1200 Dual Input will swap back to the AC input.								
Connectors	AC input: 97B-3102E-16-10P (Bayonet) DC input: Pos. MG 02R 20-2P-SQF 36 123 LT -003E-RT (Bayonet) Neg. MG 02R 20-2P-SQF 36 126 LT -003E-RT (Bayonet) DC output: 97B-3102E-22-22S (Bayonet) Alarm 1: Binder 09-0404-30-02 Alarm 2: Binder 09-0412-30-04 NTC 24 volt/PAR/COM: 2 pieces. Binder 09-0416-30-05 NTC 12 volt: Binder 09-0416-30-05 Alarm 12 volt: Binder 09-0404-30-02								
Grounding	Available in front								
Acoustic noise	At ambient temperatures below 40°C the acoustic noise is 45 dBA.								
Cooling	Forced air by temperature controlled fan								

ComPact 1200 Dual Input Power Supply

Specification

Electrical Data	
AC input	
AC input voltage	99 — 276VAC
AC input frequency	45 — 430Hz
Power Factor (PF)	Typical 0.99 @ full load
Input current at max load (30V,40A+14,4V,8A) and 50Hz:	15.5A @ 99VAC 13.5A @ 115VAC 7A @ 230VAC
Total Harmonic Distortion (THD) @ 28V/40A 230VAC/50Hz	<12%
Efficiency at max load	>84% @ 115V >85% @ 230C
12VDC input	
Input voltage: Operational Max	9 — 16VDC +25VDC
Charging, 12V DC input:	8A, 3 stage temperature compensated
Input current at max load (30V,40A)	130A @ 11VDC 109A @ 13.2VDC
Efficiency at full load	> 82% @ 13.2VDC
28VDC output	
Nominal output voltage	28VDC
Adjustable output voltage	20.0 — 34.0VDC
Nominal output current	40A
Adjustable current limit	5 – 40 Amps
Short circuit current	≤44.0 Amps
Load sharing	Max 3 Amps deviation
Output voltage ripple and noise	<100mV p-p, 20MHz bandwidth
Output voltage regulation	<1,5% zero/max load

Environmental
<p>High temperature <u>Operation</u> MIL-STD-810G, Method 501.5, Procedure II , 60°C</p> <p><u>Storage</u> MIL-STD-810G, Method 501.5, Procedure I, 71°C</p>
<p>Low temperature <u>Operation</u> MIL-STD-810G, Method 502.5, Procedure II, - 40°C</p> <p><u>Storage</u> MIL-STD-810G, Method 502.5, Procedure I, -51°C</p>
<p>Temperature shock MIL-STD-810G, Method 503.5, -51°C - +71°C. (Non-operational)</p>
<p>Humidity MIL-STD-810G, Method 507.5, Procedure II, Aggravated</p>
<p>Vibration MIL-STD-810G, Method 514.6, category 20, procedure 1. Excitation level: ITOP 1-2-601, Table B-3; Secured Cargo Transportation, Tracked Vehicle, V1-V5, all axes</p>
<p>Shock MIL-STD-810G, Method 516.6, Procedure I, functional shock, 40g 11ms</p>
<p>Fungus In accordance with MIL-HDBK-454 by analysis</p>
<p>Altitude MIL-STD-810G, Method 500.5, Procedure I (Storage) and II (Operational) Test altitude is 4750m(15000ft) at 57.2Kpa for Operational and 12195m (40000ft.) at 18.8Kpa. for Storage</p>

Standards
<p>Electromagnetic Interference The power supply meets the requirements of MIL-STD-4161F; Ground Army; CE102, RE101,RE102, RS101, RS103, CS101, CS114, CS115 and CS116</p>
<p>Electrical system in Vehicles MIL-STD-1275D, DC output</p>
<p>Electrostatic discharge The power supply meets the requirements of EN 61000-4-2 for ESD</p>
<p>Safety Designed to meet EN 60950</p>
<p>Encapsulation IP67</p>

Mechanical Data	
Dimensions	
Width	220mm, 8.66"
Depth in rack	390mm, 15.35"
Depth total	420mm, 16.54"
Height	133.4mm, 5.25" (3U)
Weight	18kg, (39.7lbs)
Mounting:	Any direction and in 19" rack

Product	Part Number	NSN
ComPact 1200 Dual Input	P600320	xxx-xx-xxx-xxxx