

ComPact 1200 36 V Dual Input

ComPact dual-input power supply and battery charger,
27-52 VDC, 99-276 VAC / 5-30 VDC, 42 A

Power Supplies and UPS



Input 1: AC, 120/230 VAC, 50/60/400 Hz

Input 2: DC, 27-52 VDC

Output: 5-30 VDC, 40 A, 1200 W

Part Number: P600440

ComPact Dual Input Family Summary

- PFC
- RS-485 bus
- Active load sharing
- Battery temperature compensated charging
- Seamless switching between the AC input and the DC input
- Alarm relay outputs
- RoHS compliant
- IP67



Description

The ComPact Dual Input is a compact DC power supply and battery charger with dual inputs, switching seamlessly between an AC and a DC power source, all while maintaining a stable DC voltage at the output. The AC input current is power factor corrected and designed for optimum utilisation of weak power sources such as portable generators. The DC input enables the unit to operate from the vehicle power. When powered from the AC source, the ComPact will charge any battery connected to DC output as well as the vehicle battery connected to the DC input, preventing self-discharge.

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 alarm relay outputs and inputs for individual battery temperature sensors (battery both at the DC input and the DC output) in addition to the RS-485 bus. Temperature compensated charging ensures full battery capacity over the entire temperature range. The ComPact can be configured to charge different battery technologies, including custom specification. The firmware is user upgradeable for future battery technologies. The ComPact is protected from overvoltage, overcurrent, short circuit, reversed polarity (at both DC input and DC output) and over temperature.

Functions

Input Circuit Breaker	The input circuit breaker is for failure protection and is also used as ON/OFF switch. When switched "OFF", the ComPact Dual Input will switch to the DC source.
Alarms	Status signals are fed to separate potential free outputs, and are indicated in separate LEDs. LEDs in the AC input section: Power OK, Error, Current limit LEDs in the DC input section: Power OK, Error, Charge
Display	The display can be toggled between output voltage, output current and alarm/error codes.
AC and DC Input Voltage	When the AC voltage drops below the safe operating range, the ComPact will switch to the 12 VDC source. When the AC input voltage returns to a safe level, the ComPact will switch back to the AC input.
Connectors	AC input: Bayonet, 97B-3102E-16-10P-PCC-622 Amphenol or similar 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 NTC: Binder 09-0416-30-05 Alarm: Binder 09-0412-30-04 DC output: Bayonet, 97B-3102E-22-22S-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 and back
Acoustic Noise	At ambient temperature below 45°C the acoustic noise is 45 dBA.
Frequency	45-430 Hz
Cooling	Forced air by temperature controlled fan

Electrical Specifications

AC Input		
Input Voltage		99-276 VAC
Power Factor		Typical: 0.99
-Load: 100%, Vin: 50/60 Hz		
Input Current	Vin: 99 VAC	≤ 15.5 A
-Load: 1315 W*	Vin: 120 VAC	≤ 13 A
-Vin: 50/60 Hz	Vin: 230 VAC	≤ 7 A
Total Harmonic Distortion		≤ 12 %
-Load: 28 VDC, 40 A		
-Vin: 115/230 VAC, 50/60 Hz		
Efficiency	Vin: 120 VAC	≥ 88%
-Load: 28 VDC, 40 A	Vin: 230 VAC	≥ 90%
DC Input		
Input Voltage	Operational Maximum	27.0-52.0 VDC 63.0 VDC
Charging		2.7 A, 3 stage
Input Current	Vin: 33.0 VDC	≤ 43 A
-Load 1200 W	Vin: 40.0 VDC	≤ 37 A
Efficiency	Vin: 26 VDC	≥ 82%
-Load: 28 VDC, 40 A		
DC Output		
Default Output Voltage		28.0 VDC
Adjustable Output Voltage		5-30 VDC
Overvoltage Protection (OVP)		36.5 V
Default Output Current Limit		42 A
Adjustable Current Limit		5-42 A
Short Circuit Current		≤ setting of current limiter + 1 A
Output Voltage Ripple and Noise		≤ 100 mVp-p
-Bandwidth: 20 MHz		
Load Regulation		Typical: 50 mV
Line Regulation		Negligible
Safety		CE marked

*The load is 30 VDC, 40 A at the main DC output and 28 VDC, 2.7 A at the DC input

Standards

<p>Electromagnetic Interference</p> <p>The power is designed to meet the requirements of MIL-STD-461G. CE101, CE102, RE101, RE102, RS103, CS101, CS114, CS115, CS116 and CS118..</p>
<p>Electrical Systems in Vehicles</p> <p>The power supply is designed to meet the requirements MIL-STD-1275D for: Imported voltage surge 40 V and 100 V and ripple 14 V.</p>
<p>Electrostatic Discharge</p> <p>The power supply is designed to meet the requirements of EN 61000-4-2 for ESD.</p>

Environmental Specifications

<p>High Temperature</p> <p><u>Operational</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</p> <p><u>Operational</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</p> <p>MIL-STD-810G: Method 503.5, - 51 to + 71°C, non-operational</p>
<p>Humidity</p> <p>MIL-STD-810G: Method 507.5, Procedure II, operational</p>
<p>Vibration</p> <p>MIL-STD-810G: Method 514.6C Table 514.6C-VI. Composite wheeled vehicle vibration exposures figure 514.6C-3</p> <p>MIL-STD-801G: Method 514.6D, Category 20, Ground Vehicles, Wheeled/Tracked/Trailer, Procedure I</p>
<p>Shock</p> <p>MIL-STD-810G: Method 516.6, Procedure I, functional Shock, 40 g, 11 ms</p>
<p>Fungus</p> <p>MIL-HDBK-454: Analysis of the degree of inertness to fungus growth of the components</p>
<p>Salt Fog</p> <p>MIL-STD-810G: Method 509.5, 24 h spray, 24 h dry, 2 times</p>
<p>Altitude</p> <p><u>Operational</u> MIL-STD-810G: Method 500.5, Procedure II, 4750 m at 57.2 kPa</p> <p><u>Storage</u> MIL-STD-810G: Method 500.5, Procedure I, 12195 m at 18.8 kPa</p>
<p>Encapsulation</p> <p>The power supply is designed to meet the requirements of IP67 and has been tested by immersion in 1 m water for 30 minutes</p>

Weight and Dimensions

Width	220 mm
Depth in Rack	390 mm
Depth Total	420 mm
Height	133 mm (3U)
Weight	17 kg

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All specifications are subject to change without notice
The information contained herein is for reference only and does not constitute a warranty of performance

Partnered Supplier



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