ComPact 1200 Dual Input Series

Power Supply and Battery Charger

ComPact 1200 Dual Input

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

Input 2: DC - See table for model variants

Output: DC - 1200 W - See table for model variants

Product Summary

- MIL-STD-810G, MIL-STD-461G, MIL-STD-1275D
- Power Factor Correction (PFC)
- RS-485 bus
- Active load sharing
- Battery temperature compensated charging
- Seamless switching between AC and DC input
- Alarm relay outputs
- RoHS compliant
- IP67

Description

The ComPact 1200 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 utilization 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.

ComPact 1200 Dual Input Models

Part No.	NSN	DC Input	DC Output	Description
P600320	6130-25-161-2806	12 V	28 V	ComPact 1200 Dual Input 12V/28V, Dark Green
P600420	6130-25-162-7483	24 V	28 V	ComPact 1200 Dual Input 24V/28V, Dark Green
P600440	-	36 V	28 V	ComPact 1200 Dual Input 36V/28V, Dark Green
P600421.DGR	-	12 V	48 V	ComPact 1200 Dual Input 12V/48V, Dark Green
P600422.DGR	-	24 V	48 V	ComPact 1200 Dual Input 24V/48V, Dark Green

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Specifications

AC Input	All Variants
Input voltage	99—276 VAC
Power Factor - Load: 100 %, Vin: 50/60 Hz	Typical: 0.99
Input current - Load: 1315 W Note - The load is 1200W at the main DC output and 115W at the DC input - Vin: 50/60 Hz	≤ 15.5 A @ 99 VAC ≤ 13 A @ 120 VAC ≤ 7 A @ 230 VAC
Total Harmonic Distortion - Load: 28 VDC, 40 A - Vin: 115/230 VAC, 50/60 Hz	≤ 12 %
Efficiency - Load: 28 VDC, 40 A	≥ 88% @ 120 VAC ≥ 90% @ 230 VAC

DC Input		12V	24V	36V
Input voltage	- Operational - Maximum	9.0—16.0 VDC 25.0 VDC	18.0—32.0 VDC 50.0 VDC	27.0—52.0 VDC 63.0 VDC
Charging		8 A, 3 stage	4 A, 3 stage	2.7 A, 3 stage
Input current - Load: 1200 W		≤ 130 A @ 11.0 VDC ≤ 109 A @ 13.2 VDC	≤ 65 A @ 22.0 VDC ≤ 55 A @ 26.6 VDC	≤ 43 A @ 33.0 VDC ≤ 37 A @ 40.0 VDC
Efficiency - Load: 1100 W		≥ 82 % @ 13.2 VDC	≥ 82 % @ 26 VDC	≥ 82 % @ 39 VDC

DC Output	28V	48V
Default output voltage	28.0 VDC	48.0 VDC
Adjustable output voltage	5—34 VDC *	20—65 VDC
Overvoltage protection (OVP)	36.5 V	69.3 V
Default output current limit	42 A	42 A
Adjustable current limit	5—83 A	3—42 A
Short circuit current	≤ Setting of current limiter +1 A	≤ setting of current limiter +1 A
Output voltage ripple and noise -Bandwidth: 20MHz	≤ 100 mVp-p	≤ 300 mVp-p
Load regulation	Typical: 50 mV	Typical: 50 mV
Line regulation	Negligible	Negligible
Safety	CE marked	CE marked

* P600440 has maximum DC output voltage of 30V

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Specifications

Environmental (fully qualified unless stated)	
High temperature	
Operational	Storage
MIL-STD-810G: Method 501.5, Procedure II, +60 °C	MIL-STD-810G: Method 501.5, Procedure I, +71 °C
Low temperature	
Operational	Storage
MIL-STD-810G: Method 502.5, Procedure II, -40 °C	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-801G: 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	Storage
MIL-STD-810G: Method 500.6, Procedure II, 4572 m (15000 ft) at 57.2 kPa	MIL-STD-810G: Method 500.6, Procedure I, 12192 m (40000 ft) at 18.8 kPa
Encapsulation	
IP67: Immersion in 1 m water for 30 minutes .	

EMC (fully qualified unless stated)
Electromagnetic Interference **(48V models are designed to meet)** MIL-STD-461G: CE101, CE102, RE101, RE102, RS103, CS101, CS114, CS115, CS116 and CS118
Electrical systems in vehicles 28V DC output: MIL-STD-1275D imported voltage surge 40 V and 100 V and ripple 14 V 28V DC input: MIL-STD-1275E, all sections
Electrostatic discharge EN 61000-4-2: ESD

Mechanical	
Enclosure	Die cast and machined aluminum.
Surface finish	Paint finish. Surface finish consistent with die casting.
Width Depth in rack Depth total Height Weight	220 mm, 8.66“ 390 mm, 15.35“ 420 mm, 16.54“ 133 mm, 5.25“, 3U 17 kg, 37 lbs

Package Contents
ComPact Power Supply, Information Sheet, Test Certificate.

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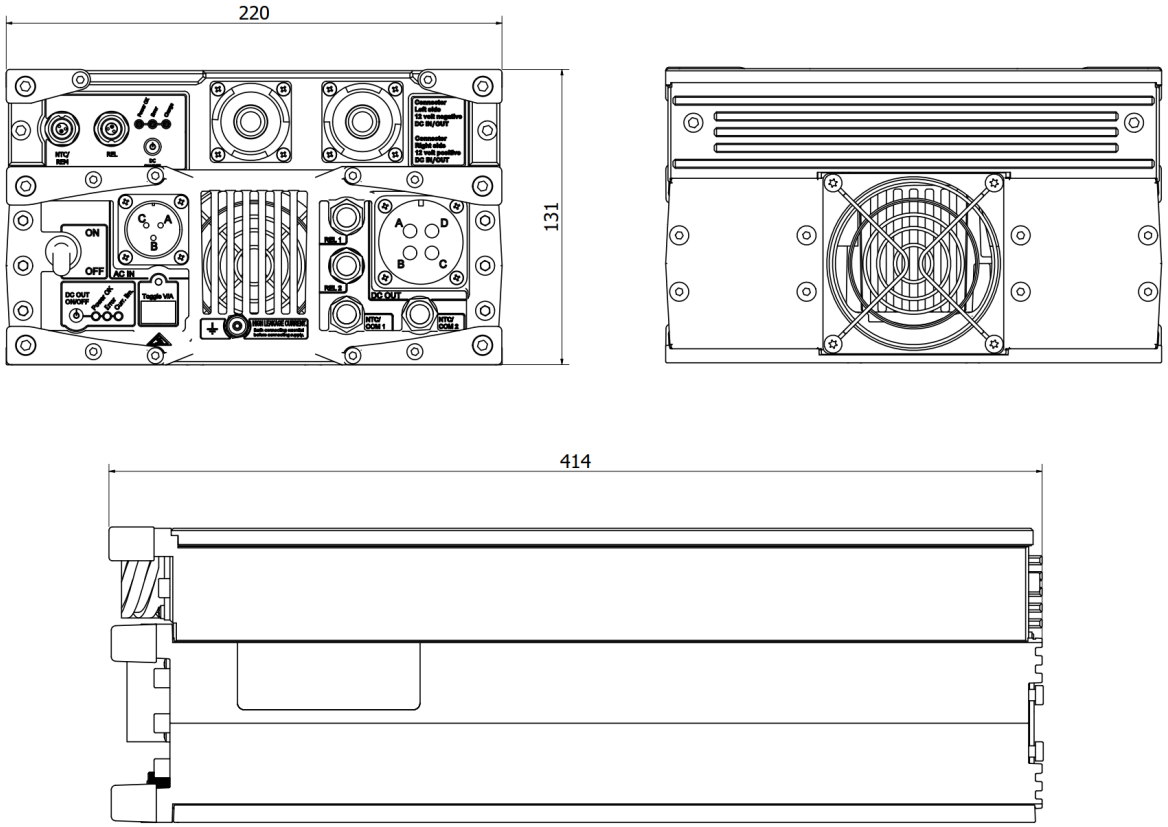
Functions	
Input circuit breaker	The input circuit breaker is for failure protection and is also used as ON/OFF switch. When switched "OFF", the ComPact 1200 Dual Input will switch to the DC source.
Alarms	Status signals are fed to separate potential free outputs, and are indicated in separate LEDs. 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 DC 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: **28V output**: Bayonet, 97B-3102E-22-22S-622 Amphenol or similar **48V output**: Bayonet, 97B-3102E-22-2S-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 range	45-430 Hz
Cooling	Forced air by temperature controlled fan

Outline Dimensions



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