



ANALYTIC SYSTEMS

Power Conversion Solutions

DC BATTERY CHARGER

MODEL
LADC620-28



Features and Benefits

- COTS Battery Charger for Military Applications
- Fast accurate 2 stage charging of a 24V battery bank from 24V vehicle power that shares a common ground at 20 Amps Continuous
- Optional Battery Temperature Compensation and Battery Over Temperature protection
- Built to meet MIL-461E for conducted and radiated emissions
- Built to meet MIL-810F for shock and vibration
- Exceeds IP66 for water and dust protection
- Inrush Current Protection with Solid State Bypass
- Output Short Circuit Protection (Automatic Recovery)
- Output over-voltage protection (trips Input Circuit Breaker)
- Better than 85% efficiency at full load
- Dual Power Switching Circuits for increased reliability
- Indicator LED's for power, charging and faults
- Spark Free battery connection (with power switch OFF)
- Can be left permanently connected to vehicle and battery
- Can function as a power supply (doesn't need battery on output to function)
- 2 year parts and labour warranty

Description

This COTS DC-DC Charger is designed for recharging a standard VLRA or standard Lead Acid battery from a 24V vehicle power source. It is designed to deliver 28.0 VDC at up to 20 amps continuous to recharge the battery. The reliable Buck-Boost architecture allows full voltage regulation whether the input voltage is above or below the regulated battery charging output.

The LADC620 is housed in a rugged water resistant extruded aluminum housing. It is tested to MIL461E for both radiated and conducted emissions and to MIL810F for shock and vibration and is designed to withstand submersion in 50cm of water for up to 5 minutes. The unit can be operated over a temperature range of -40 to +60 degrees Celsius.

Visual indicators show when the unit is powered, when it is charging as well as indicators for Input Undervoltage, Output Undervoltage and Internal Overtemperature. Available options include a carrying handle and various Mil-Spec Connectors.

Alternate configurations available upon request. Please contact the factory to discuss your exact requirements.

Applications

The LADC620 Lead Acid DC Charger can be used anywhere that fast accurate recharging of accessory 24V batteries is required in a 24V military vehicle environment.

The most celebrated use of this rugged DC-DC charger is to actively recharge the batteries in the anti-IED SPARKSII system while in operation. More than 400 of these systems are protecting soldiers in Afghanistan and elsewhere since 2012.

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Specifications	
Input Voltage	20 to 35 VDC
Electronic Inrush Current Limiting	40A Peak
Circuit Protection	Circuit Breaker, magnetic, 40 Amp c/w auxiliary trip
Output Voltage	28.0 VDC (Other Voltages by special order)
Output Current	20A Continuous
Efficiency	> 85% @ Full Load
Isolation	500VDC Output-Case, Input to Output Common Negative
Workmanship	Manufactured in accordance with IPC-A-610
Line Regulation	+/- 1.0% or 260mv, max.
Load Regulation	+/- 1.0% or 260mv, max.
Ripple	ripple < 100mV p-p @ 20A Load
Overvoltage Protection	34VDC Latching
Battery Load when OFF	3 milli-amps Max
Case Material	Black Anodized Aluminum
Dimensions	20 x 10 x 7 Inches (approximate)
Weight	16 lbs.
Operating Temperature	-40°C to 60°C
Storage Temperature Range	-50°C to 85°C
Cooling	Convection Cooling via Case
Vibration	Meets MIL-STD 810D, Method 514-3, Cat-I Proc I
Shock	Meets MIL-STD 810D, Method 516-3, Proc 11, IV, VI
Humidity	0 - 95% Non-Condensing
Water Tightness	Withstand submersion in 50cm of water for 5 minutes.
EMC – conducted emissions	Meets MIL-STD-461E: CE102, figure CE102-1, 10kHz to 10MHz.
EMC – radiated emissions	Meets MIL-STD-461E: RE102, figure RE102-4, 2MHz to 1GHz.

Note: Specifications are subject to change without notice.



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An ISO9001 and AS9100 Registered Company Battery Chargers • Inverters • Power Supplies • Voltage Converters

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