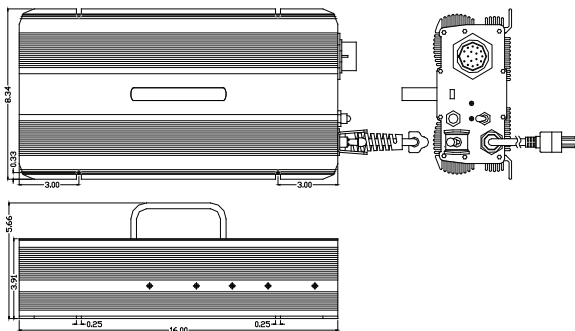


ANALYTIC SYSTEMS

Power Conversion Solutions

AC BATTERY CHARGER MODEL LIAC600-28 SERIES LI-ION NSN 6130-20-002-2433



Description

This COTS Charger is designed for recharging the SAFT Lithium-Ion Battery (LBB) used by the US Armed Forces and is controlled using industry standard interface circuitry. It can also be used in Bypass Mode as a Stand-Alone power supply. It is designed to deliver 32.0 VDC at up to 22 amps continuous to recharge the battery. The output charges to 28 VDC at up to 22 amps when operating in Bypass Mode.

The LIAC600-MS-28 can be powered from either 110 or 220 VAC (Auto Switching) at frequencies from 45 to 405 Hz. The unit is tested to MIL461E for both radiated and conducted emissions. It is compliant with 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, and with an optional pre-heater, will operate at temperatures down to -55 degrees C.

Available options include a carrying handle and various Mil-Spec Connectors. We are confident that you will get many years of reliable service from this AC Battery Charger.

Benefits

- Ultra-Quiet
- Power sensitive electronics without interference
- Rugged & Reliable
- Ensure years of safe and trouble free operation
- Fast & Accurate Charging

Design Features

- Built as a COTS Battery Charger for Military Applications
- Military-Grade extrusion ensures a high tolerance for shock and vibration
- Ultra-quiet, low EMI operation
- Can be left permanently connected
- Can function as a power supply
- Optional Carrying Handle available
- Visual indicators for output and charging
- Short circuit protection
- Output over-voltage crowbar
- Inrush Current Limiting with solid state bypass
- Universal Input for 110/220 and 50-405 Hz Operation
- Spark and surge free connection to battery
- 3 year parts and labour warranty (2 yr. Extension available)
- Designed to meet MIL-STD 810F, Method 514-3, Cat-I Proc I for vibration
- Built according to the ISO9001:2008 & AS9100

Applications

Most of the products manufactured by Analytic Systems can be adapted for military use (Commercial Off The Shelf).

We provide four different levels of ruggedization; most often, a product in military use will use the extra-wide temperature range components to allow operation to -55 degrees Celsius.

The printed circuit boards are also protected against condensation and are enhanced with vibration protection that meets or exceeds MIL-STD810F, Method 514-3 and Cat-1 Proc 1.

C.O.T.S. products are designed to meet EMC radiated and conducted emissions MIL-STD 461F.

All C.O.T.S. products are manufactured in accordance with IPC-A-610.

AC BATTERY CHARGER

MODEL LIAC600-28 SERIES LI-ION NSN 6130-20-002-2433

Electrical (Input)		
Nominal Vac (ip)	110 / 220 (Autoranging)	
Actual (Vac)	90-140	180-284
Input Amps (max)	10.5	5.3
Input Circuit Breaker	10A Magnetic	
Input Frequency	45-405 Hz	
Noise on Input	< 50 mV	
Electrical (Output)		
Output Voltage (Charging Mode)	32.0 -0.05/+0.00 VDC	
Output Voltage (Bypass Mode)	28.0 +/- 0.05 VDC	
Charging Amps	22A Continuous	
Output Ripple & Noise	< 20mV p-p @ 20A Load	
Regulation (Line & Load)	< +/- 1.0% or 260mV, max.	
Battery Banks	1	
Stages	2 (Float and bypass)	
Efficiency	> 75% @ Maximum Output	
Hold-Up Time	20msec., min. @ 24 Amps	
Dynamic Response	1 sec., max.	
Temperature Coefficient	0.02%/°C, max.	
Over-Voltage Protection	32.25 VDC Latching	
Duty Cycle	Continuous 100% for 24 hours per day	
Battery Load when OFF	25 milli-amps Max	
EMC	Designed to meet MIL461F	
Visual Indicators	Input On, Input Undervolt, Output Undervolt, & Overheat	
Environmental Specification		
Operating Temp. Range	-40° to +40°C @ maximum output Derate Linearly 2.5% per °C from 55°C to 85°C ("MS" option) (Optional pre-heater to allow -55°C operation available)	
Humidity	0 - 95% Relative Humidity (non-condensing) with standard conformal coating	
Audible Noise	NONE Ødb @ 3 ft	
Typical Service Life	> 10 yrs. (87,600 hrs)	
Isolation	Case & Input-Output 1500VDC / Output-Case 500VDC	
Mechanical Specification		
Length	17.0 in / 43.2 cm	
Width	8.2 in / 20.8 cm	
Height	3.5 in / 8.9 cm (without carrying handle)	
Clearance	1 inch (2.5 cm) all around	
Material	Marine Grade Aluminum – rainproof	
Finish	Clear Chromate or Military Green Anodize	
Fastenings	All 18-8 Stainless Steel	
Weight	14.4 lb / 6.6 kg	
Connections	Cannon Connectors Shown (Other custom MIL-Spec Connectors also available)	
Vibration	Designed to meet MIL-STD810F, Method 514-3 and Cat-1 Proc 1	
Interconnect	IPC-A-610	
Warranty	2 years	

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

8128 River Way, Delta B.C. V4G 1K5 Canada T. 604.946.9981 F. 604.946.9983 TF. 800.668.3884 (US/CANADA)

www.analyticsystems.com