7.5 Ah RECHARGEABLE LITHIUM ION POLYMER

SMART BATTERY

DESIGNED FOR MISSION CRITICAL APPLICATIONS

INVOCON, INC. **TECHNOLOGY PROFILE FEB 2011**

The Invocon **28V Rechargeable Smart Battery** uses modern lithium ion polymer battery technology. Lithium ion polymer batteries have one of the **highest energy storage and power delivery** densities (per weight) of modern batteries. This enables longer operation between charging and dependable operation of high current electrical loads or inrush currents without startup sequencing. Li-poly batteries require contol circuitry to **manage the charging and discharging profiles**. This circuitry is built into the battery system to make it "smart", allowing for direct replacement of simple older batteries without upgrading to special chargers. The Invocon Smart Battery is designed for mission critical applications. Custom circuitry, without single point of failure, provides uninterruptable power discharge for mission critical applications. This feature is enabled with an external "Flight Enabled" key and latched against unintentional release to provide full battery power delivery without overcurrent or temperature disconnect. A **microprocessor** continuously measures key battery parameters and provides this information on communication ports. Additionally, **State of Charge (SOC)** and **State of Health (SOH)** are continuously calculated so you always know the condition of the batteries in order to insure sufficient mission power and reliability.

Specifications for P/N: IVC3841000-301 at 25 degrees C

Electrical	
Battery Chemistry	Lithium Ion Polymer
Nominal Capacity @ 1C discharge	7.5 Ahr
Discharge voltage range	33.6 VDC – 22.5 VDC
Charging voltage	48 VDC +/- 5V @ 7.5 A
Continuous discharge current	4-20 Amps (Factory programmable soft cutoff)
Peak protected discharge current	24-34 Amps for 900 µsec (Factory programmable)
"Flight Enabled" discharge current	20 Amps max
Connectors	4 pin Mil. Std. 38999 for charge 4 pin Mil. Std. 38999 for discharge 9 pin Mil. Std. 38999 for communications
Communications and Data	
RS-232C, bidirectional	For data, command, and programming
RS-422, unidirectional	For flight telemetry stream
Data	Battery voltage, cell voltages, pack current, state of charge, temperature (board and pack)
Mechanical	
Size (L x W x H)	7 x 5 x 4 inches
Weight	7.5 lbs.
Case material	6061 aluminum, Alodine coated
Environmental	
Operating Temperature	-24° to 71°C
Charge Temperature	0° to 45°C
Storage Temperature	-24° to 71°C
Shelf Life - low power mode	6 years
Shelf Life - safe operating mode	> 1 month

System specifications subject to change without notice.

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