

7.5 Ah Lithium Smart Battery

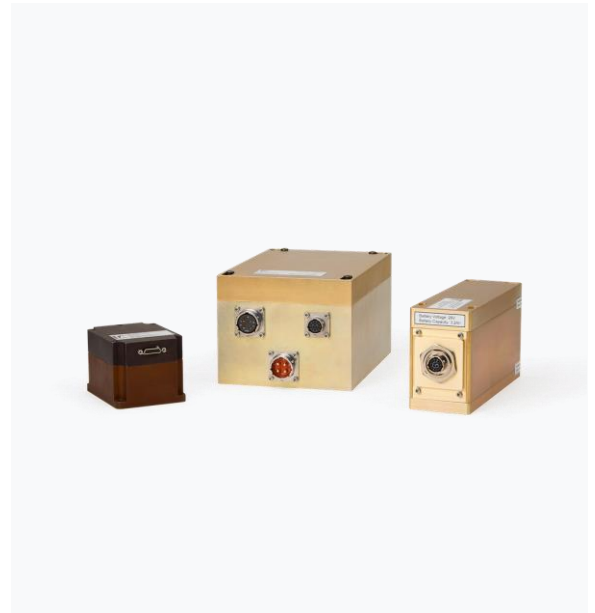
28V rechargeable lithium-ion polymer battery designed for mission-critical applications.

[PRODUCT OVERVIEW]

Dependable power. Verified mission readiness.

The Invocon 28V Rechargeable Smart Battery is built on lithium-ion polymer technology — one of the highest energy-storage and power-delivery densities per weight available. It supports long operation between charges and dependable delivery of high-current and inrush loads without startup sequencing.

Integrated management circuitry makes the battery a drop-in replacement for legacy packs — no special chargers required. An onboard microprocessor continuously reports cell-level condition and State of Charge over the communication interface, so mission power margins are always verified before commit.



[CAPABILITIES]

Features & Applications

Key Features

◆ Smart Battery Management

Onboard microprocessor continuously measures and reports key battery parameters.

◆ Cell-Level Visibility

Per-cell voltage monitoring and RTD-based pack temperature sensing verify mission readiness.

◆ Continuous State of Charge

SOC is calculated in real time so mission power margins are always known before commit.

◆ Drop-In Replacement

Integrated charge/discharge management allows direct replacement of legacy batteries — no special chargers required.

◆ Mission-Critical Discharge Options

Uninterruptible discharge for RCC 319 FTS, or protective cutoff under high-temperature, undervoltage, and overcurrent conditions.

Typical Applications

- ◆ **Flight Termination Systems (FTS)**
Qualified for RCC 319 FTS deployments requiring uninterruptible, verified power.
- ◆ **Launch Vehicle Avionics**
Primary and backup power for rocket and airframe avionics with high inrush loads.
- ◆ **Range Safety Operations**
Cell-level telemetry supports pre-launch readiness verification and range safety review.
- ◆ **Remote & Field Instrumentation**
Long shelf life and low-power mode suit extended deployments between service windows.

[TECHNICAL DATA]

Key Specifications

SPECIFICATION	VALUE
ELECTRICAL	
Battery Chemistry	Lithium Ion Polymer
Nominal Capacity @ 1C Discharge	7.5 Ah
Discharge Voltage Range	33.6 VDC – 22.4 VDC
Charging Voltage	35 – 38 VDC, from ≥100 mA to ≤7.5 A
Max Continuous Discharge Current	17 A
Connectors	4/5-pin MIL-STD-38999 (charge, discharge) · 9-pin (comms) · Full Mil-Spec available
COMMUNICATIONS & DATA	
Interface	Ethernet or RS-422 (configured in production)
Reported Data	Battery voltage, cell voltages, pack current, SOC, internal temperatures
MECHANICAL	
Size (L × W × H)	7" × 5" × 4"
Weight	7.5 lbs
Case Material	6061 aluminum, Alodine coated
ENVIRONMENTAL	
Operating Temperature	-24°C to +61°C
Charge Temperature	0°C to +45°C
Storage Temperature	-24°C to +61°C
Shelf Life (low-power mode)	5 years

[PRODUCT FAMILY]

Smart Battery Configurations

0.74 Ah Smart Battery COMPACT · MAGNESIUM CASE 3.33" × 2.58" × 2.28" · 1.0 lb · Micro-D 21-pin 7 A continuous discharge	3.2 Ah Smart Battery MID-RANGE · 38999 13-PIN 6.8" × 2.2" × 3.5" · 3.4 lbs · 6061 aluminum 10 A continuous discharge	7.5 Ah Smart Battery THIS DATASHEET 7" × 5" × 4" · 7.5 lbs · 6061 aluminum 17 A continuous discharge
--	---	---

Custom configurations: Capacity, connectors, case material, and protection behavior can be adapted to mission requirements. Contact Invocon to discuss your application.