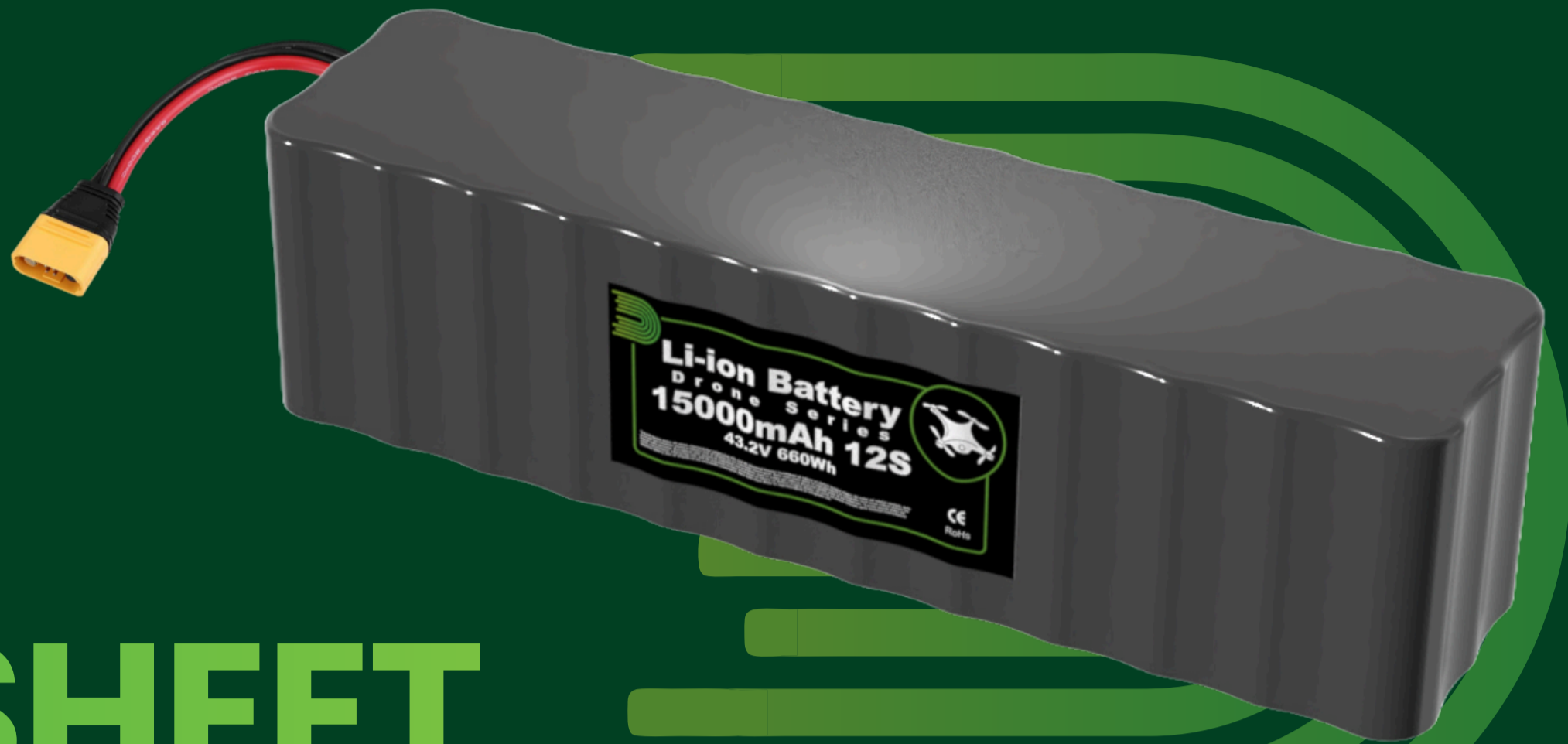




Drone Series

DATASHEET

Li-Ion Drone Battery 12S series



PRODUCT OVERVIEW

Our 12S Li-Ion Drone Battery Series is specifically engineered for high-performance drone applications that demand high energy density, lightweight construction, and exceptional discharge rates. Utilizing premium Samsung INR21700-50S or Molicel INR21700-P50B cells, these batteries deliver reliable power for the most demanding drone operations. Available with or without a smart Battery Management System (BMS) and equipped with various connectors to suit your specific requirements.

APPLICATIONS



Commercial Drones
Agriculture, Cargo, Missions, Tactical

CONNECTORS

For models with Smart BMS:

- **AS150U** Connector (Power + Communication)

For models without Smart BMS, providing cell balancing capability:

- **XT90** Connector (Power)
- **Molex Micro-Fit 16-pin** Connector (Balancing)

PROTECTION FEATURES

Overcharge Protection
Over-discharge Protection
Overcurrent Protection
Short Circuit Protection
Temperature Monitoring and Protection

COMMUNICATION INTERFACES

CANBUS
RS485
UART

ADDITIONAL FEATURES

State of Charge (SOC) Estimation
Cell Balancing
Remote Monitoring Capability

** The above features apply only for battery models with smart BMS.

M O D E L

TN12S3P-50S-01

TN12S3P-P50B-01

TN12S6P-50S-01

TN12S6P-P50B-01

ELECTRICAL SPECIFICATIONS

Cell Configuration	12S 3P	12S 3P	12S 6P	12S 6P
Nominal Voltage	43.2V	43.2V	43.2V	43.2V
Nominal Capacity	15Ah	15Ah	30Ah	30Ah
Energy	648Wh	648Wh	1,296Wh	1,296Wh
Charge Voltage	50.4V	50.4V	50.4V	50.4V
Cut-off Voltage	33.6V	33.6V	33.6V	33.6V
Energy Density	260 Wh/kg	265 Wh/kg	260 Wh/kg	265 Wh/kg

CURRENT PARAMETERS

Continuous Discharge Current	75A	75A	150A	150A
Max Continuous Discharge Current	135A	180A	270A	360A
Max Continuous Charge Current	18A	90A	36A	180A

PHYSICAL SPECIFICATIONS

Dimensions (L x W x H)	75 x 80 x 300 mm 75 x 72 x 300 mm (no BMS)	75 x 80 x 300 mm 75 x 72 x 300 mm (no BMS)	150 x 80 x 300 mm 150 x 72 x 300 mm (no BMS)	150 x 80 x 300 mm 200 x 72 x 300 mm (no BMS)
Weight	2.8 kg	2.8 kg	5.5 kg	5.5 kg
Enclosure Material	PVC Shrink Wrap	PVC Shrink Wrap	PVC Shrink Wrap	PVC Shrink Wrap

ENVIRONMENTAL SPECIFICATIONS

PERFORMANCE SPECIFICATIONS

Operating Temperature	Charge: 0°C to 45°C	Cycle Life	1,000 cycles (at 80% Depth of Discharge, 25°C)
	Discharge: -20°C to 60°C	Certifications	CE, UN 38.3, RoHS, IEC 62133
Storage Temperature	Short-term (< 1 month): -20°C to 45°C	Warranty	12 months
	Long-term (> 1 month): 0°C to 25°C		
Humidity	≤85% RH		

**GOT QUESTIONS?
GET IN TOUCH WITH US**

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