



Premium Series

# DATASHEET

Premium High Power & Density 12S Series



## PRODUCT OVERVIEW

The Premium 12S Series is engineered to power professional UAVs and drones requiring 48V-class systems, enabling greater flight efficiency, longer range, and reduced cable losses. Utilizing high energy density cells Reliance INR21700-RS60, this series delivers unmatched performance for endurance or heavy-lift drone applications.

## APPLICATIONS



### Commercial Drones

Agriculture, Cargo, Missions, Tactical



### Robotics

Warehouse, 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-RS60-01

TN12S6P-RS60-01

**ELECTRICAL SPECIFICATIONS**

Cell Configuration	12S 3P	12S 6P
Nominal Voltage	43.2V	43.2V
Nominal Capacity	18Ah	36Ah
Energy	778Wh	1555Wh
Charge Voltage	50.4V	50.4V
Cut-off Voltage	30V	30V
Energy Density	302 Wh/kg	302 Wh/kg

**CURRENT PARAMETERS**

Max Continuous Discharge Current	150 A (8.3C)	300 A (8.3C)
Max Pulse Discharge Current ( $\leq 30s$ )	240A (13.3C)	480 A (13.3C)
Max Charge Current	36 A (2C)	72 A (2C)

**PHYSICAL SPECIFICATIONS**

Dimensions (L x W x H)	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)
Weight	2.78 kg	5.15 kg
Enclosure Material	PVC Shrink Wrap	PVC Shrink Wrap

**ENVIRONMENTAL SPECIFICATIONS**

**PERFORMANCE SPECIFICATIONS**

Operating Temperature	Charge: -20°C to 60°C	Cycle Life	~500-700 cycles to ~65-70% capacity (25°C)
	Discharge: -40°C to 80°C	Designed to Meet	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	$\leq 85\%$ RH		

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

**Dan-Tech Energy GmbH**

[www.danenergy.com](http://www.danenergy.com)

Max-Planck-Str. 7, Berlin 12489 Germany

+49 (030) 5770-34433

[info@danenergy.com](mailto:info@danenergy.com)