



Premium Series

# DATASHEET

Premium High Power & Density 6S Series



## PRODUCT OVERVIEW

The Premium Molicel 6S Series is engineered for advanced UAVs and professional drones requiring extended flight times and lightweight packs. This series leverages ultra-high-energy cells (Molicel P60C or Molicel M65A) to deliver exceptional gravimetric energy density, optimized for long-endurance operations and high power performance.

## 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

TN6S1P-P60C-01

TN6S1P-M65A-01

TN6S3P-P60C-01

TN6S3P-M65A-01

**ELECTRICAL SPECIFICATIONS**

Cell Configuration	6S 1P	6S 1P	6S 3P	6S 3P
Nominal Voltage	21.6V	21.6 V	21.6V	21.6V
Nominal Capacity	6Ah	6.5Ah	18Ah	19.5Ah
Energy	130 Wh	140 Wh	390 Wh	420 Wh
Charge Voltage	25.2V	25.2V	25.2V	25.2V
Cut-off Voltage	15V	15V	15V	15V
Energy Density	288 Wh/kg	322 Wh/kg	288 Wh/kg	322 Wh/kg

**CURRENT PARAMETERS**

Continuous Discharge Current	60 A (10C)	26 A (4C)	180A (10C)	78 A (4C)
Max Continuous Discharge Current ( $\leq 30s$ )	100 A (16.7C)	39 A (6C)	300 A (16.7C)	117 A (6C)
Max Charge Current	30 A (5C)	6.5 A (1C)	90A (5C)	19.5A (1C)

**PHYSICAL SPECIFICATIONS**

Dimensions (L x W x H)	25 x 80 x 150 mm 25 x 72 x 150 mm(no BMS)	25 x 80 x 150 mm 25 x 72 x 150 mm(no BMS)	75 x 80 x 150 mm 75 x 72 x 150 mm(no BMS)	75 x 80 x 150 mm 75 x 72 x 150 mm(no BMS)
Weight	0.55 kg	0.5 kg	1.5 kg	1.4 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	~600 cycles @0.5C/1C ~500 cycles @1C/1C
	Discharge: -20°C to 60°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		

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

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