

## General

Part Number	HYP-00-2972
Voltage Nominal	51.8V
Voltage Range Min/Max	43.4V/58.1V
Charge Current	160A maximum De-rated by BMS message over CAN depending on cell voltage/temperature. Charger integration must follow this dynamic current limit. See user manual <sup>1</sup>
Discharge Current	300A maximum De-rated by BMS message over CAN depending on cell voltage/temperature. System/inverter should follow this dynamic current limit. See user manual <sup>1</sup>
Maximum Capacity	5.76kWh/111.4Ah
Maximum Energy Density	164Wh/kg
Useable capacity	Limited to 90% by BMS to improve cell life
Dimensions	W: 243 x L: 352 x H: 300.5mm
Weight	37kg
Mounting Fixtures	4x M8 mounting points for easy secure mounting

## Cells

Cell Specification	12S2P Envision AESC Gen 4
Chemistry	Manganese Laminated Li-ion (LMNC)

## Environmental

Enclosure	Sealed plastic case (IP55)	
Operating Temp Range	Charge: -25°C to +60°C	Discharge: -25°C to +60°C
Storage Conditions	Temperature: -40°C to +70°C	Humidity: Below 75%

## Battery Management System (BMS)

Communication Protocol	CAN bus at user selectable baud rate (proprietary message format). J1939 compatible option available. <sup>1</sup>
Reported Information	Cell Temperatures and Voltages, Pack Current, State of Charge and Faults
Pack Protection Mechanism	Interlock to control external protection device e.g. contactor <b>Note: The Hyperdrive modular battery pack cannot directly protect itself without an external protection circuit. This circuit must be approved by Hyperdrive before use. <sup>2</sup></b>
Balancing Method	Actively controlled dissipative balancing
Multi-Pack Behaviour	BMS implements a single master and multi-slave system
Compatible Chargers as standard	Zivan, Victron, Delta-Q, TC-Charger, SPE. For compatible models see user manual <sup>1</sup>
Charger Control	Direct current control based on cell voltage/temperature over CAN CAN bus data to allow other chargers to be implemented by user
Auxiliary Connectors	Binder 720-Series 8-way male & female
Power connectors	4x Amphenol SurLok Plus 8mm When using battery pack above 150A for considerable time, consider using both power connection points in parallel to allow for a suitable conductor cross section.

## System Configuration

Max no of packs in series	10
Max Number of Parallel Packs	127
External System Requirements	<ul style="list-style-type: none"> <li>External Protection Device (e.g. Contactor) controlled by BMS Interlock <sup>2</sup></li> <li>One External Fuse per series string</li> <li>BMS Enable signal (12-24V)</li> </ul>

## Standards

EMC	Designed to meet: EN61000-6-2:2005 and EN61000-6-3:2007 + A1:2011
Transport	UN38.3 rev 6 including impact and vibration testing
Other	RoHS directive and WEEE directive

<sup>1</sup> HYP-131-MAN-Z-001 - User manual R11 or above.

<sup>2</sup> ENG-FO-018 - Customer Schematic Checklist R2 or above.