

DATASHEET

Battery: Plus

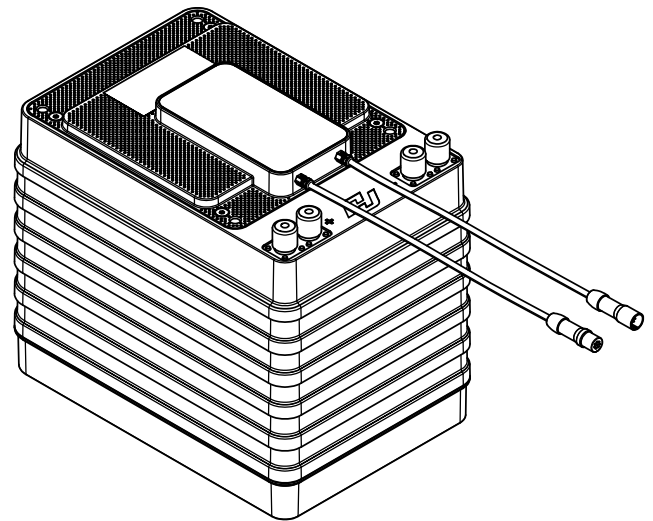
HYP-00-2890 (with cables)

HYP-00-3165 (without cables)

Combining a high-performance lithium-ion NMC battery pack with a built in Battery Management System (BMS) Turntide's intelligent battery systems are designed for rapid deployment and volume manufacture, supplying you with class-leading energy density and performance. Our batteries are ideal for multiple applications, including construction, agriculture, and marine industries. With a standardised design, our modular product range provides a flexible and scalable battery energy storage solution.

Features

- + Integrated charger controls
- + UN38.3 certified: approved for global shipping
- + Access to world-class battery cell technology
- + Proven automotive quality and global high volume supply
- + Versatile: scale up capacity without additional controllers
- + Environmental protection enclosure: fully plastic case (IP55)
- + Cell chemistry: lithium-ion nickel manganese cobalt (NMC)



General

Part Number	HYP-00-2890 (with cables) or HYP-00-3165 (without cables)
Voltage Nominal	51.8V
Voltage Range Min/Max	43.4V/58.1V
Charge Current	132A maximum De-rated by BMS message over CAN depending on cell voltage/temperature. Charger integration must follow this dynamic current limit. See user manual ¹
Discharge Current	132A maximum De-rated by BMS message over CAN depending on cell voltage/temperature. System/inverter should follow this dynamic current limit. See user manual ¹
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	14S2P Envision AESC Gen 4
Chemistry	Manganese Laminated Li-ion (LNMC)

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. ¹
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 Note: The Hyperdrive modular battery pack cannot directly protect itself without an external protection circuit. This circuit must be approved by Hyperdrive before use. ²
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, Bassi. For compatible models see user manual ¹
Charger Control	Direct current control based on cell voltage/temperature over 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"> External Protection Device (e.g. Contactor) controlled by BMS Interlock ² One External Fuse per series string BMS Enable signal (12-24V)

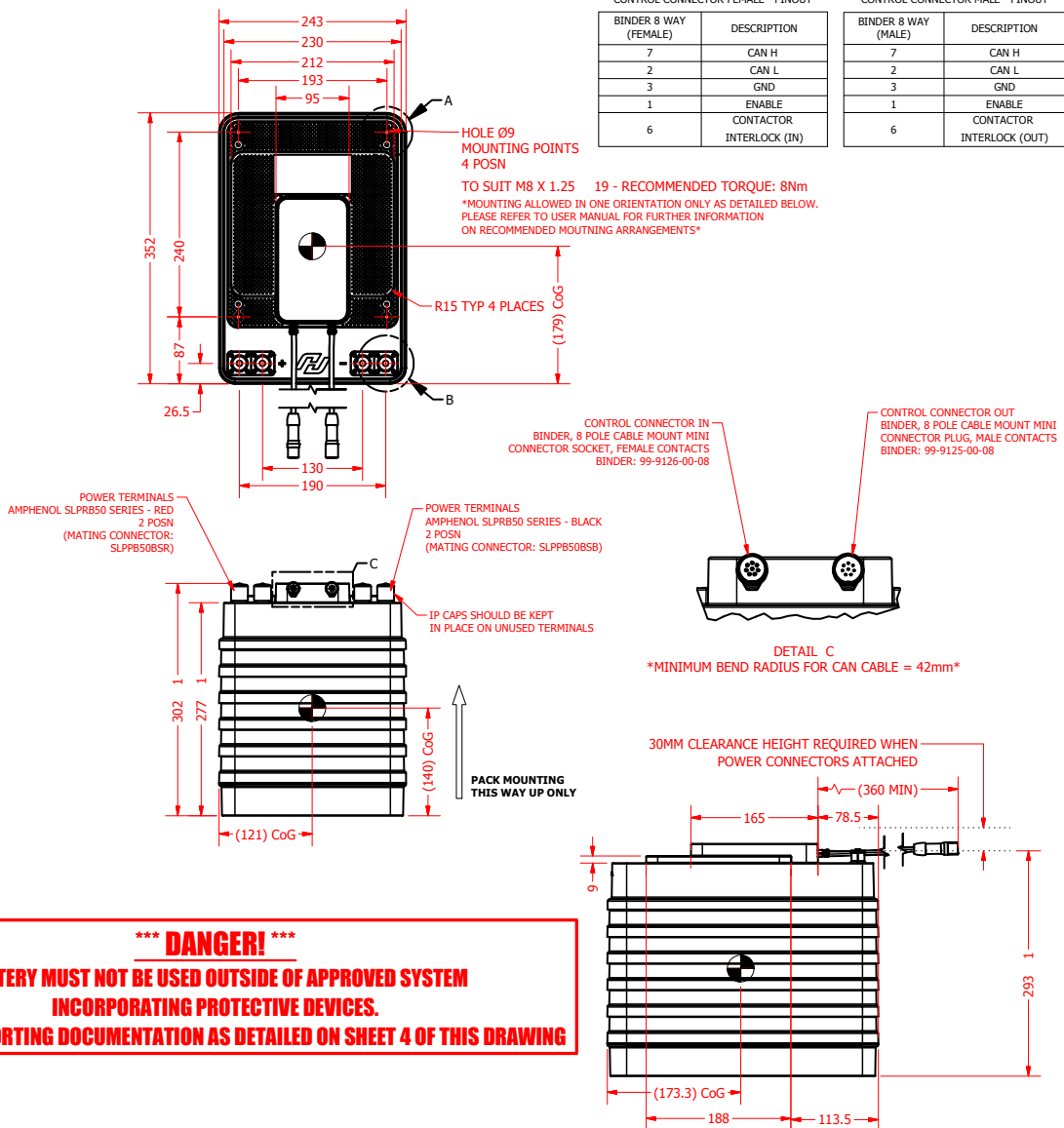
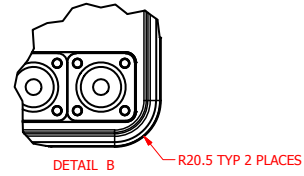
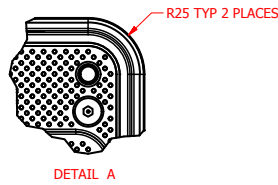
¹ HYP-131-MAN-Z-001 – User manual R11 or above.

² ENG-FO-018 – Customer Schematic Checklist R2 or above.

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

Dimensions



TURNTIDE TECHNOLOGIES

Our breakthrough technologies accelerate electrification and sustainable operations for energy-intensive industries