

Integration of Power Vehicles and Power System

Integration of Power System



▶ About Velotric Energy

Velotric Energy Co., Ltd. is dedicated to the development of sectors related to the design of battery module, battery health management, environmental protection energy storage system and electric vehicles. The firm also holds the research development of various batteries and electromechanical systems, grasping numerous key components and integration technologies.

Velotric Energy continues to promote electric ferries domestically and partakes in the power system planning of Israel fuel cell batteries firm, which allows Taiwanese industries to rise and shine on the global stage. Velotric Energy will continue to proactively develop eco-friendly energy saving electric vehicles and green products by seeking a better future for the world.

威量電能

*Velotric Energy
Co., Ltd.*



Tel / +886-3-407-1657

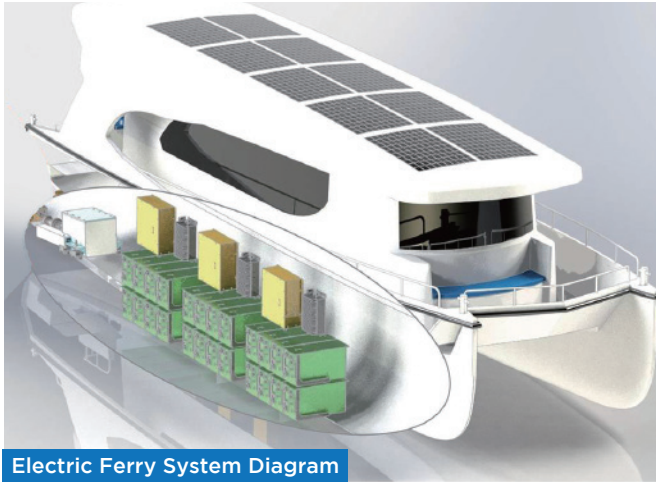
Fax / +886-3-407-1667

Address / 5F.-3, No. 185, Kewang Rd., Longtan Dist., Taoyuan City 325016

great@velotric.com

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Electric Ferry System



Electric Ferry System Diagram

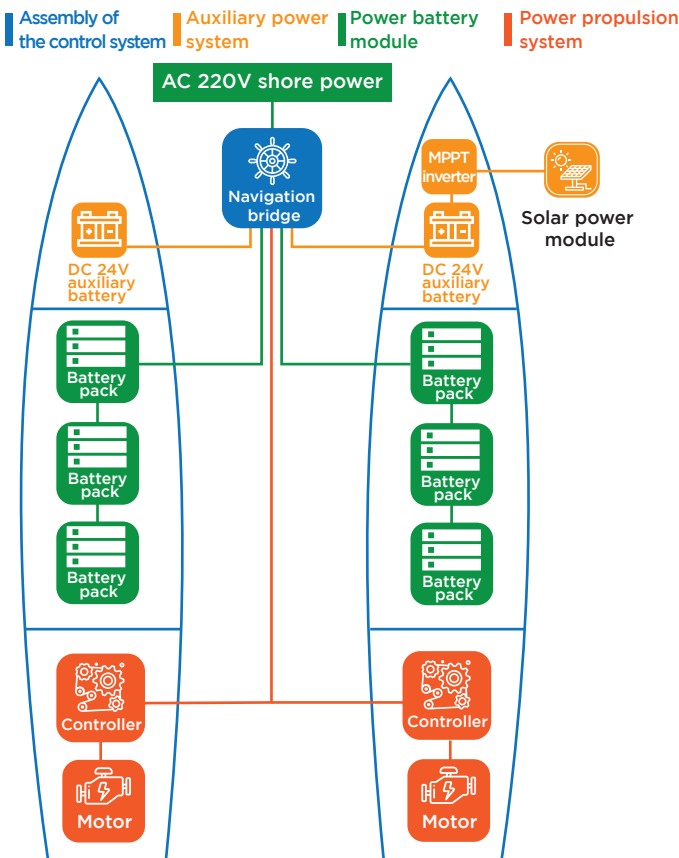
The electric ferry system has lesser restrictions than conventional diesel ferries and has the advantages of energy saving, zero carbon emission, low pollution and low noises. Furthermore, the power is sufficient enough to fulfill all the sailing schedule throughout the day.

The power system of the electric ferry adopts DC96V, a safe and low voltage. In addition, 6 units of 10kwh batteries are connected in parallel sets to disperse risks of the 60kwh lithium iron power battery. Velotric's protection against electric shock is the most requested safety requirements within low voltage modules.

Velotric Energy has already completed over 14 installations of electric ferry system till now, and has functions allowing to remote monitor the battery and motor operating status and its temperature. The system assists ship owners to effectively manage safety and health status of the battery.

Structure of the Power System

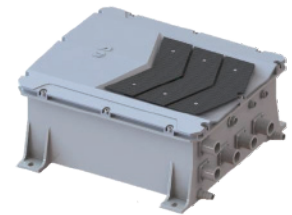
Velotric Energy is able to offer custom-made structure of the power system according to the actual needs of the ship owners. The battery configuration and whether to install solar power modules could be customized in order to optimize the overall system to the best status. The structure below is model of the catamaran.



Power System Specifications



Motor



Controller

Motor Parameter List

Rated Power	30KW	Insulation Grade	F
Rated Current	300Amp	Max. Current	450Amp
Rated Revolution	1,000RPM	Max. Rotation Speed	1,200RPM
Rated Torque	300Nm	Protection Rating	IP 54

Controller Parameter List

Input Voltage	DC72-750V	Rated Input Voltage	DC96V
Max. Input Current	340Amp	Control Method	Vector V/F Control
Accuracy of Speed Control	30.2%	Protection Rating	IP67
Cooling Method	Forced water cooling	Vibration	< 4.9m/s ² (0.5G)
Protection Function	Short Circuit, Overcurrent, Overvoltage, Under Voltage, Overheating, Overload Protection	Storage Temperature	-40°C~+70°C