



Type Approval Certificate

This is to certify that the undernoted product(s) has/have been tested with satisfactory results in accordance with the relevant requirements of the Lloyd's Register Type Approval System.

Manufacturer	Leclanché E-Mobility SA
Address	Avenue des Découvertes 14, Yverdon-les-Bains, 1400, Switzerland
Place of Production	Leclanché E-Mobility SA Avenue des Découvertes 14, Yverdon-les-Bains, 1400, Switzerland
Place of Production	Leclanché GmbH Industriestraße 1, Willstätt, 77731, Germany
Type	Lithium-Ion Battery System
Description	The Navius MRS-3 battery system is a scalable storage solution intended to use in the marine environment, consisting of lithium-ion battery modules. It stores electrical energy fed by ship's own generated power or by shore charging, and on demand, releases this energy to vessels electrical distribution system. It consists of the latest generation Leclanche M3 Energy battery modules equipped with proprietary high-energy lithium-ion cells, housed in a scalable and modular rack system with a disconnect system and controlled by a Functionally Safe Battery Management system (BMS). The Navius MRS-3 battery system utilizes liquid-cooling for more efficient thermal management, longer system lifetime and high performance. Battery Modules At the core of the MRS-3 are G/NMC cells with an unmatched combination of energy density and cycle life. Each cell in the module is temperature-monitored. The modules are liquid-cooled with dedicated cooling plates. All cooling plate and pipe connections

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