

## UN 38.3 Test Summary

*Lithium Battery Test Summary in Accordance with Sub-section 38.3 of the UN Manual of Tests and Criteria*

**Manufacturer [a], [b]:**

KION Battery Systems GmbH  
Zeche Gustav 1, Unit 3; 63791 Karlstein am Main; Germany  
Phone: +49 (0)6188 9929-0  
E-Mail: [info@kion-batterysystems.com](mailto:info@kion-batterysystems.com)

**Tested P/N [f] (v):** (1) SDI 120Ah cell (2) 120Ah Modules (3) 12S2S4P Battery Group 11.6

**Qualified type P/N [f] (v):** 12S2S4P Battery Group 11.6

**Test report reference (ID) [d]:** (1) SX20180402Z01 (2) BU-202200226-B1,  
(3) TH Aschaffenburg KBS-2021-BG11.6

**Test report date [e]:** (1) 04/02/2018, (2) 10/21/2020, (3) 02/03/2023

**Test Laboratory [c]:** (1) Samsung SDI-ARN Power Battery Co. LTD, China  
(2) Batteryuniversity GmbH, Am Sportplatz 30, 63791 Karlstein am Main,  
(3) STZ Energieeffiziente Leistungselektronik für elektrische Antriebe und Speicher, HS Aschaffenburg, Birnbaumweg 18, 63741 Aschaffenburg

**Battery description [f]:**

Technology (i): Lithium Ion

Mass (ii): 1238 kg

Watt hour rating (iii): 33820 Wh (\*useable Watt hour rating, equivalent to 80 % of installed energy)

Physical description (iv): Rechargeable lithium-ion battery composed of 12 x 2 serial modules in parallel, each consisting of 12 serial strings of 120Ah cells

**List of Tests conducted [g]:**

T.1 Altitude simulation:	Passed	T.5 External short circuit:	Passed
T.2 Thermal Test:	Passed	T.6 Impact/Crush:	Passed
T.3 Vibration:	Passed	T.7 Overcharge:	N/A
T.4 Shock:	Passed	T.8 Forced discharge:	Passed

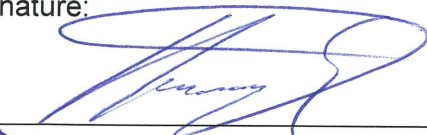
**Reference to assembled battery testing requirements [h]:** Assembly of batteries 38.3.3 (g)

**Applied standard [i]:** UN ST/SG/AC.10/11/Rev. 7

**Signatory [j]:**

Date: 10.07.2023

Signature:



Christian Hasenstab - or -  Tobias Zierhut  
Managing Director