


## UN38.3 Lithium Battery Test Summary

<p><b>(a) Name of product</b> Industrial Transceiver</p>	<p><b>(b) Product manufacturer's contact information</b></p>
<p><b>(c) Name of the test laboratory</b> Refer to attached Battery Test Summary</p>	<p>TEKTELIC Communications Inc. 7657 10<sup>th</sup> St. NE, Calgary, AB Canada, T2E 8X2</p>
<p><b>(d) Unique test report identification number</b> Refer to attached Battery Test Summary</p>	<p>1.403.338.6900 <a href="mailto:info@tektelic.com">info@tektelic.com</a> <a href="http://www.tektelic.com">www.tektelic.com</a></p>
<p><b>(e) Date of test report</b> Refer to attached Battery Test Summary</p>	<p><b>(f) Description of cell or battery</b> XENO model XL-205F STD Tadiran model TL-5930/S Tadiran model TL-2300/S Saft model LS33600 Refer to attached Battery Test Summary</p>
<p><b>(g) List of tests conducted</b> Refer to attached Battery Test Summary</p>	<p><b>(h) Reference to assembled battery testing requirements</b> Refer to attached Battery Test Summary</p>
<p><b>(i) Reference edition of the Manual of Tests and Criteria</b> Refer to attached Battery Test Summary</p>	<p><b>(j) Signature with name and title of signatory</b> Refer to attached Battery Test Summary</p>
<p><b>Identification number of this document</b> T0005485_TS</p>	<p><b>Date of release for this document</b> Dec. 11, 2019</p>

## UN 38.3 Test Summary Report

<p>[a] Name of cell, battery or product manufacturer, as applicable</p> <p>Item Number : XL-205F          Item Name : Cell          Item Description : 3.6V / 19Ah          Same Type Part          - STD : Standard(with no terminal)          - Terminal type            · Pin : AX            · Harness and cable : C&amp;W</p>	<p>[b] Cell, battery, or product manufacturer's contact information to include address, phone number, email address and website for more information;</p> <p>Xenoenergy Co., Ltd.          70-7, Muha-ro, Hwaseong-city, Kyonggi-do          Republic of Korea, 18729          Tel : +82 31 355 3511          E-mail : global@xenoenergy.com          Website : www.xenoenergy.com</p>																
<p>[c] Name of the test laboratory to include address, phone number, email address and website for more information;</p> <p>Xenoenergy Co., Ltd.          70-7, Muha-ro, Hwaseong-city, Kyonggi-do          Republic of Korea, 18729          Tel : +82 31 355 3511          E-mail : R&amp;D@xenoenergy.com          Website :www.xenoenergy.com</p>	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 70%; padding: 5px;"> <p>[d] A unique test report identification number;</p> <p style="text-align: center;">Xeno Q110525</p> </td> <td style="width: 30%; padding: 5px;"> <p>[e] Date of test report;</p> <p style="text-align: center;">May. 25, 2011</p> </td> </tr> </table>	<p>[d] A unique test report identification number;</p> <p style="text-align: center;">Xeno Q110525</p>	<p>[e] Date of test report;</p> <p style="text-align: center;">May. 25, 2011</p>														
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<p>[f] Description of cell or battery to include at a minimum:          Lithium ion or lithium metal cell or battery; Mass; Watt-hour rating, or lithium content; Physical description of the cell/battery; and Model numbers.</p> <p>Cell used in implantable medical devices,          such as : Pacemaker(IPG), Neuro-Stimulators or          Implantable Defibrillators(ICD)</p> <p>( i ) Lithium metal          (ii) Mass : max. 111g          (iii) Lithium content : 4.8g          (iv) ELC or W/h rating : 3.6V / 19Ah          ( v ) Model number: XL-205F</p>	<p>[g] List of tests conducted and results (i.e., pass/fail);</p> <table style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 80%;"><input checked="" type="checkbox"/> Test T.1 : Altitude simulation</td> <td style="text-align: right;">T1 Test Pass</td> </tr> <tr> <td><input checked="" type="checkbox"/> Test T.2 : Thermal test</td> <td style="text-align: right;">T2 Test Pass</td> </tr> <tr> <td><input checked="" type="checkbox"/> Test T.3 : Vibration</td> <td style="text-align: right;">T3 Test Pass</td> </tr> <tr> <td><input checked="" type="checkbox"/> Test T.4 : Shock</td> <td style="text-align: right;">T4 Test Pass</td> </tr> <tr> <td><input checked="" type="checkbox"/> Test T.5 : External short circuit</td> <td style="text-align: right;">T5 Test Pass</td> </tr> <tr> <td><input checked="" type="checkbox"/> Test T.6 : Impact/Crush(cell only test)</td> <td style="text-align: right;">T6 Test Pass</td> </tr> <tr> <td><input checked="" type="checkbox"/> Test T.7 : Overcharge(N.A for Li-metal only)</td> <td style="text-align: right;">Not Applicable</td> </tr> <tr> <td><input checked="" type="checkbox"/> Test T.8 : Forced discharge(cell only test)</td> <td style="text-align: right;">T8 Test Pass</td> </tr> </table> <p>Testing additional comments :</p> <p style="text-align: center;">No additional information</p>	<input checked="" type="checkbox"/> Test T.1 : Altitude simulation	T1 Test Pass	<input checked="" type="checkbox"/> Test T.2 : Thermal test	T2 Test Pass	<input checked="" type="checkbox"/> Test T.3 : Vibration	T3 Test Pass	<input checked="" type="checkbox"/> Test T.4 : Shock	T4 Test Pass	<input checked="" type="checkbox"/> Test T.5 : External short circuit	T5 Test Pass	<input checked="" type="checkbox"/> Test T.6 : Impact/Crush(cell only test)	T6 Test Pass	<input checked="" type="checkbox"/> Test T.7 : Overcharge(N.A for Li-metal only)	Not Applicable	<input checked="" type="checkbox"/> Test T.8 : Forced discharge(cell only test)	T8 Test Pass
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<p>[h] Reference to assembled battery testing requirements, if applicable (i.e. 38.3.3 (f) and 38.3.3 (g));</p> <p>Not Applicable.</p>	<p>[i] Reference to the revised edition of the Manual of Tests and Criteria used and to amendments thereto, if any;</p> <p>UN Manual of Tests and Criteria, Part III, sub-section 38.3.  <i>sixth revised edition</i></p>																
<p>[j] Signature with name and title of signatory as an indication of the validity of information provided.</p> <p>Assistant Managing Director          Director of R&amp;D Center</p> <p style="text-align: center; margin-top: 20px;">   <b>JR Kim</b> </p>	<p>Date this document was generated.</p> <p style="text-align: center;">Oct. 21, 2019</p>																

# UN 38.3 Test Summary Report

Lithium Cell or Battery Test Summary in Accordance with Section 2.9.4 UN Model Regulations and Sub-section 38.3 of the UN Manual of Tests and Criteria, Part III, subsection 38.3.5

[a] <input type="checkbox"/> Cell <input checked="" type="checkbox"/> Battery <input type="checkbox"/> Product <input checked="" type="checkbox"/> <b>Tested Type Part #:</b> TL-5930 <input type="checkbox"/> <b>Same Type Part #:</b>
[b] <b>Manufacturer</b> Tadiran Batteries Ltd. 44 Yitzhak Rabin Blvd, Kiryat Ekron, Israel 7695001 T. +972 8 9 44 503 <a href="mailto:sales@tadiran-batt.com">sales@tadiran-batt.com</a> <a href="http://www.tadiran.com">www.tadiran.com</a>

[d] Unique report ID: 15Q-609
[e] Report date: June 2003
[c] <b>Test Laboratory</b> Tadiran Batteries Ltd. 44 Yitzhak Rabin Blvd, Kiryat Ekron, Israel 7695001 T. +972 8 9 44 560 <a href="mailto:aya-d@tadiran-batt.com">aya-d@tadiran-batt.com</a> <a href="http://www.tadiran.com">www.tadiran.com</a>

**Same Type Part Numbers # (all):** covers all the **TL-5930/xxx, TLH-5930/xxx, TL-2300/xxx, SL-2780/xxx, SL-780/xxx** part numbers with various contact terminations / harness.

[f] (i) <input type="checkbox"/> Li-ion <input checked="" type="checkbox"/> Li-metal.  (iv) <b>Description:</b> TL-5930 is a primary (non-rechargeable), 3.7V lithium metal battery and can be transported as a lithium metal battery under UN numbers 3090 and 3091. The TL-5930 battery may come with optional suffixes consisting of a "P" followed by one or more letters and a digit. These suffixes indicate different types of finishing to the battery, e.g., TL-5930/S, TL-5930/T, TL-5930/P, etc. Tadiran manufactures all cells/batteries under a quality management system as required under this regulation.  (ii) Mass: 100 g (iii) <input type="checkbox"/> Watt hour rating or <input checked="" type="checkbox"/> Lithium content: 4.95 g (v) <input checked="" type="checkbox"/> Cell <input type="checkbox"/> Battery <input type="checkbox"/> Product. Model number/Part number: TL-5930
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[g] List of Tests Conducted	Result (Pass / Fail / N.A.)	Test record reference
38.3.4.1 T.1: Altitude simulation	Pass	15Q-609
38.3.4.2 T.2: Thermal test	Pass	15Q-609
38.3.4.3 T.3: Vibration	Pass	15Q-609
38.3.4.4 T.4: Shock	Pass	15Q-609
38.3.4.5 T.5: External short circuit	Pass	15Q-609
38.3.4.6 T.6: Impact/Crush (cell only test)	Pass	15Q-609
38.3.4.7 T.7: Overcharge (N.A for Li-metal only)	N.A.	N.A.
38.3.4.8 T.8: Forced discharge (cell only test)	Pass	15Q-609

[h] Battery assembly:  Not Applicable.  UN38.3.3 (f)  UN38.3.3 (g)  
 [i] Test Reference: UN Manual of Tests and Criteria, Part III, sub-section 38.3. *Fifth revised edition*

[j] Signatory A. Date: 2019.01.01 Name: Aya Daniel Title: Quality Manager Signature:  <div style="text-align: center; font-family: cursive; font-size: 1.2em;">A. Daniel</div>
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[j] Signatory B. Date: 2019.01.01 Name: Kobi Pinsky Title: VP Marketing and Sales Signature:  <div style="text-align: center; font-family: cursive; font-size: 1.2em;">Kobi Pinsky</div>
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**Important!** The above signatory / signatories affirm that this document is a true and correct summary of the original individual tests and test data. The original test data is confidential information available to competent State Authorities with valid identification and only upon their formal request. Disclosure of the original test data to any other entity upon its request will be considered by Tadiran and, should Tadiran consider this request is with merit, may be subject to the prior execution of a nondisclosure agreement.



## TRANSPORTATION CERTIFICATE

Ref. TC – LS33600 12/2013 - 2

This is to certify that the following Saft cell **LS33600** has met the requirements of the UN Recommendations on the transport of dangerous goods, Part III, sub-section 38.3, Manual of Tests and Criteria.

Products covered by this certificate	
Tested product P/N	04262L
Products P/N by assimilation	All part numbers relative to single cells, whatever their finish mode – with or without end-tabs or wiring and connectors.

Product description	
Technology	Primary (non-rechargeable Lithium-Thionyl chloride (Li-SOCl <sub>2</sub> ) cell
Description	Primary D-sized single cell
Nominal Voltage	3.6V
Nominal Capacity	17 Ah
Lithium metal content	4.53g

	Results	Report number
38.3.4.1 Test 1: Altitude Simulation	Passed	P0256-03
38.3.4.2 Test 2: Thermal test	Passed	P0256-03
38.3.4.3 Test 3: Vibration	Passed	P0256-03
38.3.4.4 Test 4: Shock	Passed	P0256-03
38.3.4.5 Test 5: External short circuit	Passed	P0256-03
38.3.4.6 Test 6: Impact/crush (cell test)	Passed	P0087-01
38.3.4.7 Test 7: Overcharge	Not applicable for primary battery	
38.3.4.8 Test 8: Force-discharge (cell test)	Passed	P0256-03

### Product Classification

This lithium battery and/or cell meets the criteria and requirements of the relevant sections of the **UN Manual of Tests and Criteria** and is assigned for transportation to **UN 3090** in accordance with the current **UN Recommendations on the Transport of Dangerous Goods Model Regulations**.

### Signed on Behalf of Saft, Specialty Battery Group

Catherine Gautier Lithium Division Quality Customer

dated 18/12/13

Pascal Foucoin Lithium Division Quality Mgr

dated 18/12/2013