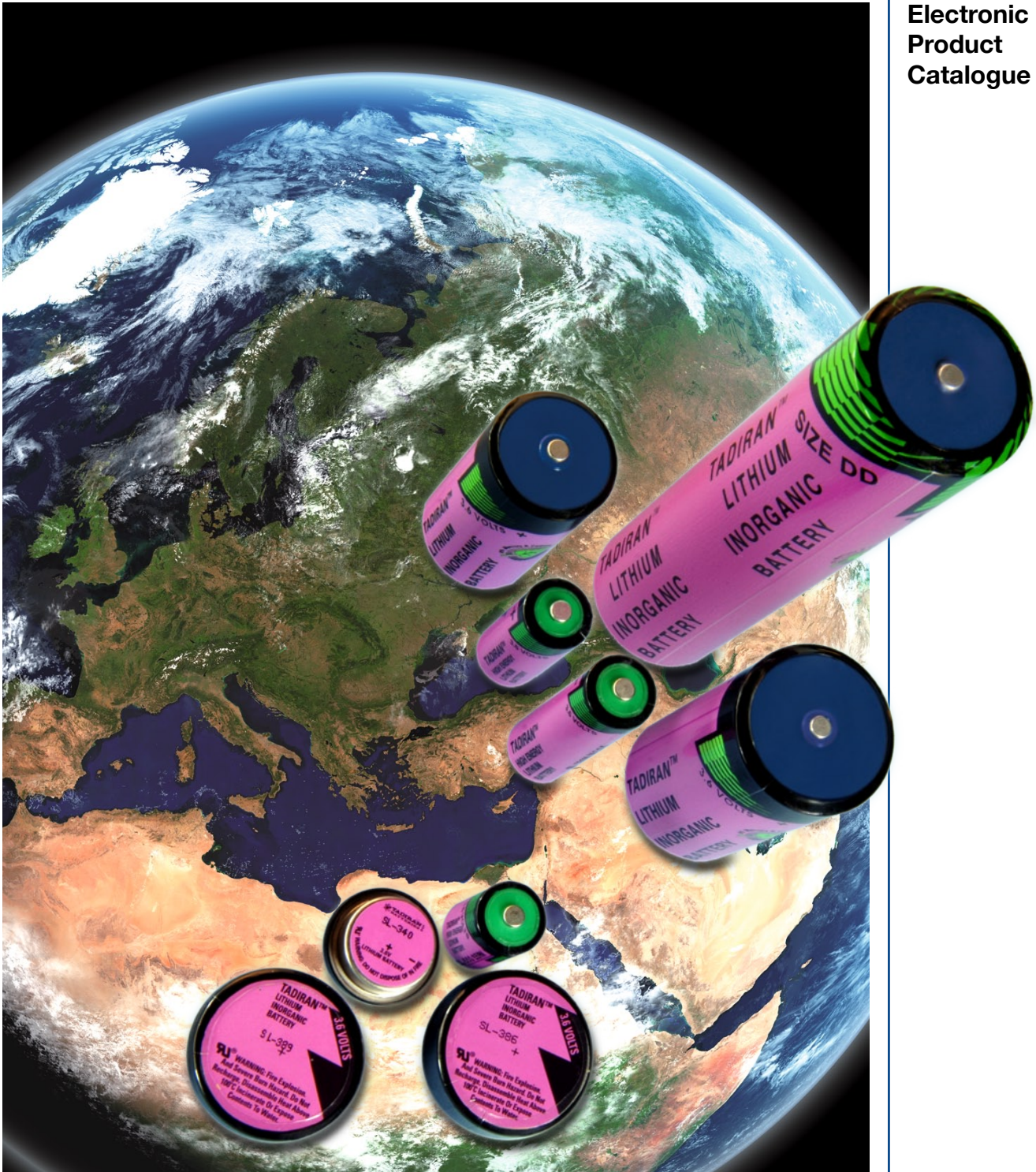


# Tadiran Lithium Batteries

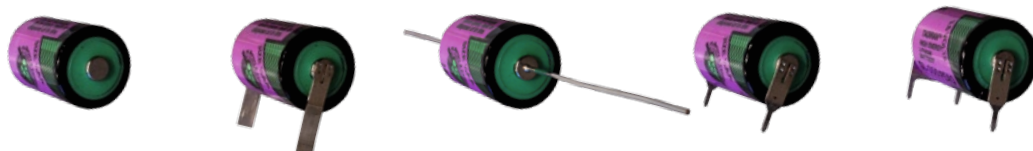
Electronic  
Product  
Catalogue



## Lithium Thionyl Chloride (LTC) Batteries

| Model                                                    | Terminations     | Catalogue number | Size | Nominal voltage | Nominal capacity | Nominal current | Max. cont. discharge current | Temperature range | Dimensions  |
|----------------------------------------------------------|------------------|------------------|------|-----------------|------------------|-----------------|------------------------------|-------------------|-------------|
| SL-300 series: for standard use and stand-by             |                  |                  |      |                 |                  |                 |                              |                   |             |
| SL-350                                                   | /S /T /P /PR /PT | 11 1 0350x 00    | ½AA  | 3.6 V           | 1.2 Ah           | 0.6 mA          | 6 mA                         | -55...+85 °C      | Ø 14.5 × 25 |
| SL-361                                                   | /S /T /P /PR /PT | 11 1 0361x 00    | ¾AA  | 3.6 V           | 1.6 Ah           | 1 mA            | 10 mA                        | -55...+85 °C      | Ø 14.5 × 33 |
| SL-360                                                   | /S /T /P /PR /PT | 11 1 0360x 00    | AA   | 3.6 V           | 2.4 Ah           | 2 mA            | 20 mA                        | -55...+85 °C      | Ø 14.5 × 50 |
| SL-500 series: for extended temperature range            |                  |                  |      |                 |                  |                 |                              |                   |             |
| SL-550                                                   | /S /T /P /PR /PT | 11 1 0550x 00    | ½AA  | 3.6 V           | 0.8 Ah           | 0.6 mA          | 6 mA                         | -55...+130 °C     | Ø 14.5 × 25 |
| SL-561                                                   | /S /T /P /PR /PT | 11 1 0561x 00    | ¾AA  | 3.6 V           | 1.0 Ah           | 1 mA            | 10 mA                        | -55...+130 °C     | Ø 14.5 × 33 |
| SL-560                                                   | /S /T /P /PR /PT | 11 1 0560x 00    | AA   | 3.6 V           | 1.7 Ah           | 2 mA            | 20 mA                        | -55...+130 °C     | Ø 14.5 × 50 |
| SL-700 / SL-2700 series: for enhanced start              |                  |                  |      |                 |                  |                 |                              |                   |             |
| SL-750                                                   | /S /T /P /PR /PT | 11 1 0750x 00    | ½AA  | 3.6 V           | 1.1 Ah           | 0.6 mA          | 20 mA                        | -55...+85 °C      | Ø 14.5 × 25 |
| SL-761                                                   | /S /T /P /PR /PT | 11 1 0761x 00    | ¾AA  | 3.6 V           | 1.5 Ah           | 1 mA            | 30 mA                        | -55...+85 °C      | Ø 14.5 × 33 |
| SL-760                                                   | /S /T /P /PR /PT | 11 1 0760x 00    | AA   | 3.6 V           | 2.2 Ah           | 2 mA            | 60 mA                        | -55...+85 °C      | Ø 14.5 × 50 |
| SL-2770                                                  | /S /T /P         | 11 2 1770x 00    | C    | 3.6 V           | 8.5 Ah           | 3 mA            | 100 mA                       | -55...+85 °C      | Ø 26 × 50   |
| SL-2780                                                  | /S /T /P         | 11 2 1780x 00    | D    | 3.6 V           | 19 Ah            | 5 mA            | 200 mA                       | -55...+85 °C      | Ø 33 × 60   |
| SL-2790                                                  | /S /T            | 11 2 1790x 00    | DD   | 3.6 V           | 35 Ah            | 10 mA           | 300 mA                       | -55...+85 °C      | Ø 33 × 123  |
| SL-800 / SL-2800 series: XOL for extended operating life |                  |                  |      |                 |                  |                 |                              |                   |             |
| SL-840                                                   | Solder pins      | 11 1 18404 00    | BEL  | 3.6 V           | 0.42 Ah          | 0.5 mA          | 5 mA                         | -55...+85 °C      | Ø 18.5 × 7  |
| SL-889                                                   | Solder pins      | 11 1 18894 00    | ¼D   | 3.6 V           | 1 Ah             | 0.5 mA          | 10 mA                        | -55...+85 °C      | Ø 33 × 6    |
| SL-850                                                   | /S /T /P /PR /PT | 11 1 0850x 00    | ½AA  | 3.6 V           | 1.2 Ah           | 0.5 mA          | 20 mA                        | -55...+85 °C      | Ø 14.5 × 25 |
| SL-861                                                   | /S /T /P /PR /PT | 11 1 0861x 00    | ¾AA  | 3.6 V           | 1.6 Ah           | 0.5 mA          | 30 mA                        | -55...+85 °C      | Ø 14.5 × 33 |
| SL-860                                                   | /S /T /P /PR /PT | 11 1 0860x 00    | AA   | 3.6 V           | 2.4 Ah           | 1 mA            | 60 mA                        | -55...+85 °C      | Ø 14.5 × 50 |
| SL-2870                                                  | /S /T /P         | 11 2 1870x 00    | C    | 3.6 V           | 8.5 Ah           | 3 mA            | 75 mA                        | -55...+85 °C      | Ø 36 × 50   |
| SL-2880                                                  | /S /T /P         | 11 2 1880x 00    | D    | 3.6 V           | 19 Ah            | 4 mA            | 100 mA                       | -55...+85 °C      | Ø 33 × 60   |

## Available Terminations



| Termination | /S | /T | /P | /PR | /PT |
|-------------|----|----|----|-----|-----|
| x           | 1  | 2  | 3  | 6   | 8   |

**EXAMPLE:** for termination /PT is x = 8 and SL-850/PT has catalogue number 11 1 08508 00

## PulsesPlus™ Batteries

| Model          | Termination       | Catalogue number | Configuration |      | Nominal voltage | Nominal capacity | Maximum pulse current <sup>1)</sup> | Dimensions   |
|----------------|-------------------|------------------|---------------|------|-----------------|------------------|-------------------------------------|--------------|
|                |                   |                  | Primary cell  | HLC  |                 |                  |                                     |              |
| TLP-91111/A/SM | Flying leads      | 14 1 5761 001    | AA            | 1550 | 3.6 V           | 2.40 Ah          | 3 A                                 | 55 × 32 × 16 |
| TLP-91311/A/SM | Pressure contacts | 14 1 5763 001    | AA            | 1520 | 3.6 V           | 2.40 Ah          | 1 A                                 | Ø 16.5 × 75  |
| TLP-91311/A/ST | Solder tags       | 14 1 5763 002    | AA            | 1520 | 3.6 V           | 2.40 Ah          | 1 A                                 | Ø 16.5 × 75  |
| TLP-92111/A/SM | Flying leads      | 14 1 5771 001    | C             | 1550 | 3.6 V           | 8.50 Ah          | 3 A                                 | 55 × 44 × 28 |
| TLP-92311/A/SM | Flying leads      | 14 1 5773 001    | C             | 1520 | 3.6 V           | 8.50 Ah          | 1 A                                 | Ø 29 × 67    |
| TLP-93111/A/SM | Flying leads      | 14 1 5781 001    | D             | 1550 | 3.6 V           | 19.0 Ah          | 3 A                                 | 64 × 50 × 35 |
| TLP-93311/A/SM | Flying leads      | 14 1 5783 001    | D             | 1520 | 3.6 V           | 19.0 Ah          | 1 A                                 | Ø 34 × 78    |
| TLP-96111/A/SM | Flying leads      | 14 1 5751 001    | ½AA           | 1550 | 3.6 V           | 1.20 Ah          | 3 A                                 | 55 × 32 × 16 |
| TLP-96311/A/SM | Pressure contacts | 14 1 5753 001    | ½AA           | 1520 | 3.6 V           | 1.20 Ah          | 1 A                                 | Ø 16.5 × 50  |
| TLP-96311/A/ST | Solder tags       | 14 1 5753 002    | ½AA           | 1520 | 3.6 V           | 1.20 Ah          | 1 A                                 | Ø 16.5 × 50  |
| TLP-97111/A/SM | Flying leads      | 14 1 5721 001    | ¾AA           | 1550 | 3.6 V           | 1.65 Ah          | 3 A                                 | 55 × 32 × 16 |
| TLP-97311/A/SM | Pressure contacts | 14 1 5723 001    | ¾AA           | 1520 | 3.6 V           | 1.65 Ah          | 1 A                                 | Ø 16.5 × 58  |
| TLP-97311/A/ST | Solder tags       | 14 1 5723 002    | ¾AA           | 1520 | 3.6 V           | 1.65 Ah          | 1 A                                 | Ø 16.5 × 58  |

<sup>1)</sup> pulse duration 1 s to 3 V

## Hybrid Layer Capacitors (HLC) for use in PulsesPlus Batteries

| Model     | Maximum charge voltage | Maximum charging current | Max. cont. discharge current | Max. pulse discharge current | Maximum capacity (3.6 V) | Maximum capacity (3.9 V) | Discharge end voltage | Cell impedance | Dimensions |
|-----------|------------------------|--------------------------|------------------------------|------------------------------|--------------------------|--------------------------|-----------------------|----------------|------------|
| HLC-1520A | 3.95 V                 | 25 mA                    | 0.5 A                        | 2 A                          | 39 mAh                   | 58 mAh                   | 2.5 V                 | ≤ 250 mΩ       | Ø 15 × 20  |
| HLC-1530A | 3.95 V                 | 50 mA                    | 0.75 A                       | 3 A                          | 70 mAh                   | 105 mAh                  | 2.5 V                 | ≤ 140 mΩ       | Ø 15 × 27  |
| HLC-1550A | 3.95 V                 | 100 mA                   | 2 A                          | 5 A                          | 155 mAh                  | 236 mAh                  | 2.5 V                 | ≤ 100 mΩ       | Ø 15 × 50  |

## TLM Batteries

| Model                                  | Nominal voltage | Max. cont. discharge current | Max. pulse discharge current | Maximum capacity | End voltage | Cell impedance | Capacity retention <sup>2)</sup> | Dimensions |
|----------------------------------------|-----------------|------------------------------|------------------------------|------------------|-------------|----------------|----------------------------------|------------|
| Medium power lithium metal oxide cells |                 |                              |                              |                  |             |                |                                  |            |
| TLM-1520MP                             | 4.0 V           | 1 A                          | 2.5 A                        | 200 mAh          | 2.8 V       | ≤ 300 mΩ       | 92.5 %                           | Ø 15 × 20  |
| TLM-1530MP                             | 4.0 V           | 2 A                          | 5 A                          | 340 mAh          | 2.8 V       | ≤ 200 mΩ       | 92.5 %                           | Ø 15 × 27  |
| TLM-1550MP                             | 4.0 V           | 4 A                          | 15 A                         | 800 mAh          | 2.8 V       | ≤ 100 mΩ       | 92.5 %                           | Ø 15 × 50  |
| High power lithium metal oxide cells   |                 |                              |                              |                  |             |                |                                  |            |
| TLM-1520HP                             | 4.0 V           | 1.25 A                       | 3.5 A                        | 135 mAh          | 2.8 V       | ≤ 250 mΩ       | 89 %                             | Ø 15 × 20  |
| TLM-1530HP                             | 4.0 V           | 2.25 A                       | 6.5 A                        | 240 mAh          | 2.8 V       | ≤ 175 mΩ       | 89 %                             | Ø 15 × 27  |
| TLM-1550HP                             | 4.0 V           | 5 A                          | 15 A                         | 550 mAh          | 2.8 V       | ≤ 100 mΩ       | 89 %                             | Ø 15 × 50  |

<sup>2)</sup> after 10 years storage at RT

Any values given here are for information purposes only. They also depend on actual conditions of use and are not warranties of future performance. Subject to change.

## Tadiran Batteries GmbH

Tadiran Batteries GmbH is one of the leading manufacturers of primary (non rechargeable) lithium batteries in Europe. The company was founded as a Joint Venture between Tadiran and Sonnenschein in 1984 and – under the name of Sonnenschein Lithium – has successfully served the market for more than 25 years. Together with its parent company **Tadiran Batteries Ltd.**, the company is continuously improving its performance with regard to products, highest quality and customer service. Tadiran Batteries Ltd. is fully owned by Saft groupe S.A. (Euronext: SAFT).

The main focus of the company is to achieve a maximum customer satisfaction. Thus the guide line is to be the best in design-in, in full technical support and logistics. The company is committed to the world class philosophy. The management system is certified to ISO 9001 and – since 1999 – to ISO 14001.

Tadiran Batteries GmbH employs approx. 100 people and has its production facilities in Büdingen, close to Frankfurt, Germany.

The company is a leader in the development of lithium batteries for industrial use. Its **Lithium Thionyl Chloride (LTC) technology** is well established for more than 30 years. Tadiran LTC-Batteries are suitable where a 3.6 Volt high energy primary battery is required for up to ten years and more stand alone operation.

Major Advantages of Tadiran LTC Batteries:

- ♦ High and stable voltage 3.6 V
- ♦ Highest capacity (up to 19 Ah per D size cell)
- ♦ Wide temperature range (-40 °C to +85 °C or 130 °C respectively)
- ♦ High reliability (hermetic laser sealing, glass-to-metal seal)
- ♦ Outstanding storage capability (up to 10 years)
- ♦ Recognized safety (UL)
- ♦ Very low self discharge (less than 1 % per year)

The **PulsesPlus™ technology**, providing high current pulses in combination with high energy, has been successfully introduced into the market and plays a significant role especially in the asset tracking and monitoring market segment.

Major Advantages of PulsesPlus Batteries:

- ♦ High and stable voltage 3.6 V (optional 3.9 V)
- ♦ High pulse current capability
- ♦ Immediate response, no passivation effect
- ♦ Highest capacity (up to 19 Ah per D size cell)
- ♦ Wide operating temperature range (-40 °C to +85 °C)
- ♦ High reliability (hermetic laser sealing, glass-to-metal seal)
- ♦ Outstanding storage capability (up to 10 years)
- ♦ Recognized safety (UL)
- ♦ Very low self discharge (less than 2 % per year)

The **TLM technology** has been developed recently for applications requiring high power discharge after a long storage time, e.g. as a back up battery for emergency call devices in automotive telematic systems.

Major Advantages of TLM High and Medium Power Batteries:

- ♦ High voltage 4.0 V
- ♦ Very high pulse current capability
- ♦ Immediate response, no passivation effect
- ♦ Wide operating temperature range (-40 °C to +85 °C)
- ♦ High reliability (hermetic laser sealing, glass-to-metal seal)
- ♦ Outstanding storage capability (up to 10 years)
- ♦ Recognized safety (UL)
- ♦ Low self discharge
- ♦ **NEW:** Medium power version with more capacity



Lithium Thionyl Chloride (LTC) Batteries



PulsesPlus Batteries



TLM High Power Batteries