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| 5   | <b>Lithium Thionyl Chloride (LTC) Batteries</b>                       |                         |                                |                              |                              |                           |                          |                                  |                   |                 |
|   | Model   | Terminations            | Catalogue number <sup>1)</sup> | Size                         | Nominal voltage              | Nominal capacity          | Nominal current          | Max. cont. discharge current     | Temperature range | Dimensions (mm) |
| <b>SL-300 series: for standard use and stand-by</b>             |   |                         |                                |                              |                              |                           |                          |                                  |                   |                 |
| 6   | 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 x 25     |
| 7   | SL-361  | /S /T /P /PR /PT        | 11 1 0361x 00                  | ⅔AA                          | 3.6 V                        | 1.6 Ah                    | 1 mA                     | 10 mA                            | -55 ... +85 °C    | Ø 14.5 x 33     |
| 8   | 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 x 50     |
| <b>SL-500 series: for extended temperature range</b>            |   |                         |                                |                              |                              |                           |                          |                                  |                   |                 |
| 9   | SL-550  | /S /T /P /PR /PT        | 11 1 0550x 00                  | ½AA                          | 3.6 V                        | 0.9 Ah                    | 0.6 mA                   | 50 mA                            | -55 ... +130 °C   | Ø 14.5 x 25     |
| 10  | SL-561  | /S /T /P /PR /PT        | 11 1 0561x 00                  | ⅔AA                          | 3.6 V                        | 1.1 Ah                    | 1 mA                     | 75 mA                            | -55 ... +130 °C   | Ø 14.5 x 33     |
| 11  | SL-560  | /S /T /P /PR /PT        | 11 1 0560x 00                  | AA                           | 3.6 V                        | 1.8 Ah                    | 2 mA                     | 100 mA                           | -55 ... +130 °C   | Ø 14.5 x 50     |
| <b>SL-700 / SL-2700 series: for enhanced start</b>              |   |                         |                                |                              |                              |                           |                          |                                  |                   |                 |
| 12  | SL-750  | /S /T /P /PR /PT        | 11 1 0750x 00                  | ½AA                          | 3.6 V                        | 1.1 Ah                    | 1 mA                     | 50 mA                            | -55 ... +85 °C    | Ø 14.5 x 25     |
| 13  | SL-761  | /S /T /P /PR /PT        | 11 1 0761x 00                  | ⅔AA                          | 3.6 V                        | 1.5 Ah                    | 1.3 mA                   | 75 mA                            | -55 ... +85 °C    | Ø 14.5 x 33     |
| 14  | SL-760  | /S /T /P /PR /PT        | 11 1 0760x 00                  | AA                           | 3.6 V                        | 2.2 Ah                    | 2 mA                     | 100 mA                           | -55 ... +85 °C    | Ø 14.5 x 50     |
| 15  | SL-2770   | /S /T /P                | 11 2 1770x 00                  | C                            | 3.6 V                        | 8.5 Ah                    | 3 mA                     | 230 mA                           | -55 ... +85 °C    | Ø 26 x 50       |
| 16  | SL-2780   | /S /T /P                | 11 2 1780x 00                  | D                            | 3.6 V                        | 19 Ah                     | 4 mA                     | 340 mA                           | -55 ... +85 °C    | Ø 33 x 60       |
| 17  | SL-2790   | /S /T                   | 11 2 1790x 00                  | DD                           | 3.6 V                        | 35 Ah                     | 10 mA                    | 450 mA                           | -55 ... +85 °C    | Ø 33 x 123      |
| 18  | TL-2450   | /P (with insolation)    | 11 1 13763 02                  | ⅓ <sub>10</sub> C            | 3.6 V                        | 0.55 Ah                   | 0.5 mA                   | 5 mA                             | -55 ... +85 °C    | Ø 24 x 5.6      |
|   | TL-2450   | /P (without insolation) | 11 1 13763 22                  | ⅓ <sub>10</sub> C            | 3.6 V                        | 0.55 Ah                   | 0.5 mA                   | 5 mA                             | -55 ... +85 °C    | Ø 24 x 5.6      |
| <b>SL-800 / SL-2800 series: XOL for extended operating life</b> |   |                         |                                |                              |                              |                           |                          |                                  |                   |                 |
| 19  | SL-889  | Solder pins             | 11 1 18894 00                  | ⅓ <sub>10</sub> D            | 3.6 V                        | 1 Ah                      | 0.5 mA                   | 10 mA                            | -55 ... +85 °C    | Ø 33 x 6        |
| 20  | SL-886  | Solder pins             | 11 1 18864 00                  | ⅓ <sub>6</sub> D             | 3.6 V                        | 1.5 Ah                    | 0.5 mA                   | 10 mA                            | -55 ... +85 °C    | Ø 33 x 10       |
| 21  | 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 x 25     |
| 22  | SL-861  | /S /T /P /PR /PT        | 11 1 0861x 00                  | ⅔AA                          | 3.6 V                        | 1.6 Ah                    | 0.5 mA                   | 30 mA                            | -55 ... +85 °C    | Ø 14.5 x 33     |
| 23  | 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 x 50     |
| 24  | SL-2870   | /S /T /P                | 11 2 1870x 00                  | C                            | 3.6 V                        | 8.5 Ah                    | 3 mA                     | 75 mA                            | -55 ... +85 °C    | Ø 26 x 50       |
| 25  | SL-2880   | /S /T /P                | 11 2 1880x 00                  | D                            | 3.6 V                        | 19 Ah                     | 4 mA                     | 100 mA                           | -55 ... +85 °C    | Ø 33 x 60       |
| 26  | <b>PulsesPlus™ Batteries</b>  |                         |                                |                              |                              |                           |                          |                                  |                   |                 |
|   | Model   | Termination             | Catalogue number               | Configuration                |                              | Nominal voltage           | Nominal capacity         | Max. pulse current <sup>2)</sup> | Dimensions (mm)   |                 |
|   |   |                         |                                | Primary cell                 | HLC                          |                           |                          |                                  |                   |                 |
| 27  | TLP-91111/A/SM  | Flying leads            | 17 91111 101                   | AA                           | 1550                         | 3.6 V                     | 2.40 Ah                  | 3 A                              | 55 x 32 x 16      |                 |
| 28  | TLP-91311/A/SM  | Pressure contacts       | 17 91311 101                   | AA                           | 1520                         | 3.6 V                     | 2.40 Ah                  | 1 A                              | Ø 16.5 x 75       |                 |
| 28  | TLP-91311/A/ST  | Solder tags             | 17 91311 102                   | AA                           | 1520                         | 3.6 V                     | 2.40 Ah                  | 1 A                              | Ø 16.5 x 75       |                 |
| 29  | TLP-92111/A/SM  | Flying leads            | 17 92111 101                   | C                            | 1550                         | 3.6 V                     | 8.50 Ah                  | 3 A                              | 55 x 44 x 28      |                 |
| 30  | TLP-92311/A/SM  | Flying leads            | 17 92311 101                   | C                            | 1520                         | 3.6 V                     | 8.50 Ah                  | 1 A                              | Ø 29 x 67         |                 |
| 31  | TLP-93111/A/SM  | Flying leads            | 17 93111 101                   | D                            | 1550                         | 3.6 V                     | 19.0 Ah                  | 3 A                              | 64 x 50 x 35      |                 |
| 32  | TLP-93311/A/SM  | Flying leads            | 17 93311 101                   | D                            | 1520                         | 3.6 V                     | 19.0 Ah                  | 1 A                              | Ø 34 x 78         |                 |
| 33  | TLP-96111/A/SM  | Flying leads            | 17 96111 101                   | ½AA                          | 1550                         | 3.6 V                     | 1.2 Ah                   | 3 A                              | 55 x 32 x 16      |                 |
| 34  | TLP-96311/A/SM  | Pressure contacts       | 17 96311 101                   | ½AA                          | 1520                         | 3.6 V                     | 1.2 Ah                   | 1 A                              | Ø 16.5 x 50       |                 |
| 34  | TLP-96311/A/ST  | Solder tags             | 17 96311 102                   | ½AA                          | 1520                         | 3.6 V                     | 1.2 Ah                   | 1 A                              | Ø 16.5 x 50       |                 |
| 35  | TLP-97111/A/SM  | Flying leads            | 17 97111 101                   | ⅔AA                          | 1550                         | 3.6 V                     | 1.6 Ah                   | 3 A                              | 55 x 32 x 16      |                 |
| 36  | TLP-97311/A/SM  | Pressure contacts       | 17 97311 101                   | ⅔AA                          | 1520                         | 3.6 V                     | 1.6 Ah                   | 1 A                              | Ø 16.5 x 58       |                 |
| 36  | TLP-97311/A/ST  | Solder tags             | 17 97311 102                   | ⅔AA                          | 1520                         | 3.6 V                     | 1.6 Ah                   | 1 A                              | Ø 16.5 x 58       |                 |
| 37  | <b>Hybrid Layer Capacitors (HLC) for use in PulsesPlus™ Batteries</b> |                         |                                |                              |                              |                           |                          |                                  |                   |                 |
|   | Model   | Maximum charge voltage  | Maximum charging current       | Max. cont. discharge current | Max. pulse discharge current | Maximum capacity (3.67 V) | Maximum capacity (3.9 V) | Discharge end voltage            | Cell impedance    | Dimensions (mm) |
| 38  | HLC-1020  | 3.95 V                  | 8 mA                           | 0.25 A                       | 0.75 A                       | 12.5 mAh                  | 20 mAh                   | 2.5 V                            | ≤ 400 mΩ          | Ø 10 x 20       |
| 38  | HLC-1020L   | 3.95 V                  | 6 mA                           | 0.15 A                       | 0.5 A                        | 8 mAh                     | 12.5 mAh                 | 2.5 V                            | ≤ 600 mΩ          | Ø 10 x 20       |
| 39  | HLC-1520A   | 3.95 V                  | 25 mA                          | 0.5 A                        | 2 A                          | 39 mAh                    | 58 mAh                   | 2.5 V                            | ≤ 250 mΩ          | Ø 15 x 20       |
| 40  | HLC-1530A   | 3.95 V                  | 50 mA                          | 0.75 A                       | 3 A                          | 70 mAh                    | 105 mAh                  | 2.5 V                            | ≤ 140 mΩ          | Ø 15 x 27       |
| 41  | HLC-1550A   | 3.95 V                  | 100 mA                         | 2 A                          | 5 A                          | 155 mAh                   | 236 mAh                  | 2.5 V                            | ≤ 100 mΩ          | Ø 15 x 50       |
| 42  | <b>Tadiran Lithium Metal Oxide (TLM) Batteries</b>                    |                         |                                |                              |                              |                           |                          |                                  |                   |                 |
|   | Model   | Nominal voltage         | Max. cont. discharge current   | Max. pulse discharge current | Maximum capacity             | End voltage               | Cell impedance           | Capacity retention <sup>3)</sup> | Dimensions (mm)   |                 |
| 43  | TLM-1520HPM   | 4.0 V                   | 1.75 A                         | 3.75 A                       | 125 mAh                      | 2.8 V                     | ≤ 100 mΩ                 | 89 %                             | Ø 15 x 20         |                 |
| 44  | TLM-1530HPM   | 4.0 V                   | 3.2 A                          | 6.8 A                        | 225 mAh                      | 2.8 V                     | ≤ 100 mΩ                 | 89 %                             | Ø 15 x 27         |                 |
| 45  | TLM-1550HPM   | 4.0 V                   | 7 A                            | 15 A                         | 500 mAh                      | 2.8 V                     | ≤ 100 mΩ                 | 89 %                             | Ø 15 x 50         |                 |
| 46  | <b>Tadiran Lithium Ion (TLI) Batteries – RECHARGEABLE</b>             |                         |                                |                              |                              |                           |                          |                                  |                   |                 |
|   | Model   | Max. charge voltage     | Max. charging current          | Max. cont. discharge current | Max. pulse discharge current | Maximum capacity          | End voltage              | Cell impedance                   | Dimensions (mm)   |                 |
| 47  | TLI-1020A   | 4.1 V                   | 8 mA                           | 0.16 A                       | 0.4 A                        | 25 mAh                    | 2.5 V                    | ≤ 600 mΩ                         | Ø 10 x 20         |                 |
| 48  | TLI-1520A   | 4.1 V                   | 25 mA                          | 0.5 A                        | 1.25 A                       | 90 mAh                    | 2.5 V                    | ≤ 250 mΩ                         | Ø 15 x 20         |                 |
| 49  | TLI-1530A   | 4.1 V                   | 50 mA                          | 1 A                          | 2.5 A                        | 150 mAh                   | 2.5 V                    | ≤ 175 mΩ                         | Ø 15 x 27         |                 |
| 50  | TLI-1550A   | 4.1 V                   | 100 mA                         | 2 A                          | 5 A                          | 330 mAh                   | 2.5 V                    | ≤ 100 mΩ                         | Ø 15 x 50         |                 |
| 51  | Safety and Transport Regulations                                      |                         |                                |                              |                              |                           |                          |                                  |                   |                 |

<sup>1)</sup> complete catalogue number depends on termination; see product page <sup>2)</sup> pulse duration 1 s to 3 V <sup>3)</sup> after 10 years of storage at RT

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

# About Tadiran

## Tadiran Batteries GmbH

Tadiran Batteries GmbH is the leading manufacturer of primary (non rechargeable) lithium batteries in Europe.

The company was founded as a Joint Venture between Tadiran and Sonnenschein in 1984 and has very successfully served the market – first under the name of Sonnenschein Lithium and since 2006 as Tadiran Batteries – for more than 35 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 Group.

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 (Quality) and – since 1999 – to ISO 14001 (Environment).

Tadiran Batteries GmbH employs approx. 120 people and has its production facilities in Büdingen, 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 35 years. Tadiran LTC batteries are suitable where a 3.6 Volt high energy primary battery is required for up to 25 years and more stand alone operation.

The **PulsesPlus™** technology, providing high current pulses in combination with high energy, plays a significant role especially for long distance communication (e.g. GSM) modules.

The TLM technology has been developed 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.

The RECHARGEABLE TLI series is specifically designed for long-term use in harsh environments and represents an important breakthrough in lithium-ion battery technology.

## Customer benefits

Tadiran has focused its ongoing efforts on promoting the understanding and further development of lithium batteries. This determination offers to the customer a number of decisive benefits such as:

- ▶ Access to over 50 years of experience in research and development, production and marketing
- ▶ Adaptability and reliability in meeting rapidly evolving customer needs
- ▶ Detailed technical support in terms of design and application – before, during and after the purchase
- ▶ Highly qualified experts available for support on short notice
- ▶ Customized production of single- and multi-cell batteries to meet specific requirements
- ▶ Reliable delivery, secured by contractual agreements and second sourcing.

For successful use of a battery, the co-operation between the supplier and the customer must commence at the earliest possible point: at times it is simply more economical to design a circuit for the characteristics of the best suitable energy supply, rather than having to forgo its advantages because it is too late for changes.

## Environment

The European Battery Directive 2006/66/EC restricts the use of certain hazardous substances in batteries and establishes rules for the collection, treatment, recycling and disposal of waste batteries and accumulators. It is transposed individually in each EU member state.

The following information is important for end users of batteries:

Batteries are marked with the crossed-out wheeled bin symbol.



The symbol reminds end users that batteries must not be disposed as municipal waste, but collected separately. Used batteries can be returned at the point of sale at no charge.

A Technical Notice is available upon request with details on the disposal service offered by Tadiran.

