

# Solar Tracker Optimizer

## STO is composed mainly by three types of hardware units:

- **STO/a**, thought to be completely autonomous and to be installed on the tracker you want to monitor without needing any wiring connection, measures the current tilt of the tracker table, calculates the optimal angle, and logs the measured data in a "csv" file stored in the internal micro SD card.  
The device can be configured via Wi-Fi using the customized STO APP or simply connecting it to another device able to manage a browser.  
In the web page generated by STO/a it is possible to read or to change the current setting, or simply download the stored data.
- **STO/b** works like the STO/a unit and furthermore it generates two cool contacts to control the tracker motion according to the optimal calculated curve.
- **The 10.1' industrial tablet**, complete with cable, battery charger, STO configuration APP, and user and installation manual.

STO is delivered in its in a wheeled waterproof box containing No. 8 STO/a units, No. 2 STO/b units, No.1 industrial tablet, and complements and spare parts (No. 24 clamps, No. 3 spare battery chargers with cables, No.1 universal travel adapter, No.1 multiplug, No. 2 spare micro-SD cards, No. 6 complementary micro-SD cards adapters, No.1 screwdriver, and No. 2 mini-USB cables).

The dimensions of the waterproof box are 595 x 475 x H 270 mm and its weight is 16.5 Kg.

### STO/a unit specifications

|                                 |  |
|---------------------------------|--|
| <b>Weight</b>                   | 0.5 Kg                                       |
| <b>Dimensions</b>               | 190 x 80 x 63 mm                             |
| <b>International Protection</b> | IP 65  |
| <b>Power supply</b>             | 0.5 W Max, battery supplied                  |
| <b>Battery specifications</b>   | 2200 mAh, 11 V, 200 g, 3 cells (8.1 Wh/each) |
| <b>Autonomy</b>                 | 3 weeks in monitoring mode                   |
| <b>Measuring error</b>          | 0.3 degree                                   |

### STO/b unit specifications

|  |  |
|--|--|
| <b>Weight</b>                              | 0.5 Kg   |
| <b>Dimensions</b>                          | 190 x 80 x 63 mm   |
| <b>International Protection</b>            | IP 65  |
| <b>Power supply</b>                        | 0.5 W Max, battery supplied  |
| <b>Battery specifications</b>              | 2200 mAh, 11 V, 200 g, 3 cells (8.1 Wh/each)                                   |
| <b>Autonomy</b>                            | 3 weeks in monitoring mode   |
| <b>Measuring error</b>                     | 0.3 degree   |
| <b>Autonomy</b>                            | - 2 days in correction mode (device always on)<br>- 3 weeks in monitoring mode |
| <b>Detachable cool switch cable length</b> | 6 m  |
| <b>Cool contacts resistance</b>            | > 1 GOhm when open; < 0.5 Ohm when shorted                                     |
| <b>Cool contacts current strength</b>      | 0.5 A max  |

### Industrial tablet specifications

|                                 |   |
|---------------------------------|---|
| <b>Weight</b>                   | 1 Kg  |
| <b>International Protection</b> | IP 65   |
| <b>Power supply</b>             | 100-240 V AC; 5 V, 3 A DC                           |
| <b>Autonomy</b>                 | 8 hours   |
| <b>Full charging time</b>       | 4 hours   |
| <b>Battery capacity</b>         | 10.5 Ah @3.8 V                                      |
| <b>Radio power</b>              | 25 mW   |
| <b>Radio range</b>              | 300 m in open air                                   |
| <b>Max occupation band</b>      | 0.6% (duty cycle radio on/off, in correction mode)  |
| <b>Typical occupation band</b>  | 0.03% (duty cycle radio on/off, in monitoring mode) |
| <b>Compliance to standards</b>  | ETSI EN 301-489-1 V1.9.2 (2011-09) standard         |

### Ordering info

**Link** [www.sunto.technology/tracking/STO#order](http://www.sunto.technology/tracking/STO#order)

**Email** [sales@sunto.technology](mailto:sales@sunto.technology)