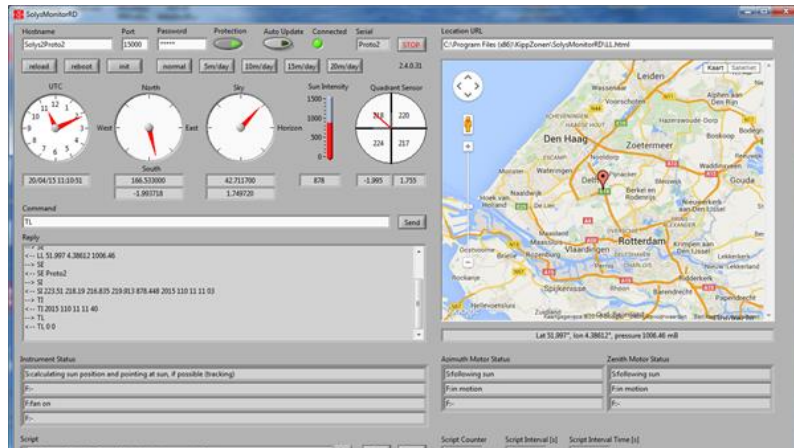


SOLYS 2 and SOLYS Gear Drive Communication with LabVIEW™

By Ruud Ringoir, Product Manager, Kipp & Zonen

Both the SOLYS 2 and SOLYS Gear Drive sun trackers can be set up without the need of a PC or external software. However, if monitoring of the tracker status is required the new 'SOLYS Monitor' software program can be used to set up communication and to view or log its status.



Display of SOLYS status and location in the LabVIEW™ program

Customers familiar with National Instruments LabVIEW™ can take it a step further and create their own communication or controlling software for the SOLYS. To do this, we have made an example program, with the source code available, to show the possibilities.

The program monitors the status of the SOLYS over Ethernet. It shows the location, calculated sun position, motor positions, visualizes the sun sensor activity and shows the global position of the connected SOLYS on Google Maps. Both the SOLYS 2 and the SOLYS Gear Drive can be used as

a sun tracker or as a two-axis positioner. This second option is not so well known but it means that, instead of tracking the sun, the SOLYS can be used to move and point a mounted instrument (such as a camera) towards any other object around it.

In the SOLYS manual all the commands are given to switch from sun tracking to positioning and how to control the movements. LabVIEW™ could be a great tool for creating a sequence of commands to track and monitor objects or to scan certain areas over time. In this way the SOLYS Gear Drive can be used to move payloads up to 80 kg with an accuracy of 0.1°.

The Virtual Instrument (VI's) source code is attached in this ZIP file, and can be downloaded from the SOLYS 2 or SOLYS Gear Drive product pages on our website.

At this moment there are two versions. The SOLYS Gear Drive code has more functionality because it incorporates the RS-485 port. As soon as the SOLYS 2 also has the RS-485 port, the SOLYS Gear Drive VI's can be used for both trackers.



This software can be freely used under GPL conditions:

www.gnu.org/licenses/licenses.en.html

The complete compiled program (250 MB) can be obtained via a request to our service department.