Solar Tracking Sensor

STS is a handy analog four-quadrant sensor providing highly accurate information about the alignment to the sun with an accuracy of 0.01 degrees.

It can work as a relative pyrheliometer: in cloudy sky conditions it is able to give real time information to tracking control units about the relative irradiation intensity and about the alignment of the sun, in order to optimize tracking systems' pointing accuracy.

Thanks to its wide viewing angle, STS can operate as a closed-loop tracking system.

It can also be profitably employed in hybrid tracking control systems implementing both the closed-loop and the ephemeris-based tracking strategy.

State-of-the-art solar pointing accuracy

- √ Pointing error of 0.01°
- √ Wide viewing angle
- √ High pointing accuracy in any weather conditions
- √ Auto-alignment functionality of the solar tracking system
- √ High reliability (MTBF ~10 years)
- √ Easy to install
- √ Extremely low maintenance

Optimized PR and energy yield

Pointing technologies are crucial for allowing solar tracking systems to accurately follow the sun as it moves throughout the day. Accurate information about the position of the sun is key to single and dual-axis solar PV tracking systems, concentrators, and in general to solar measurement systems whose performance and output quality depends on how accurately the sun is tracked.

Applications

- High-precision sun pointing and tracking control systems
- Solar position measurement systems
- High precision solar trackers
- Thermodynamic concentrators
- Test and optimization of solar tracking equipment
- Sunlight sensors

STS has been tested by

- Enel Ricerca & Innovazione

STS is a **sunto** proprietary technology. Patent Pending.

sunto.