

- Accurate pointing by simultaneously working sun-sensor and calculation mode
- Integrated sun sensor for accurate tracking and easy alignment
- Self installation by build-in GPS receiver
- HarmonicDrive® gear system for high durability
- Low power consumption - only 10W for DC models
- AC and DC models available



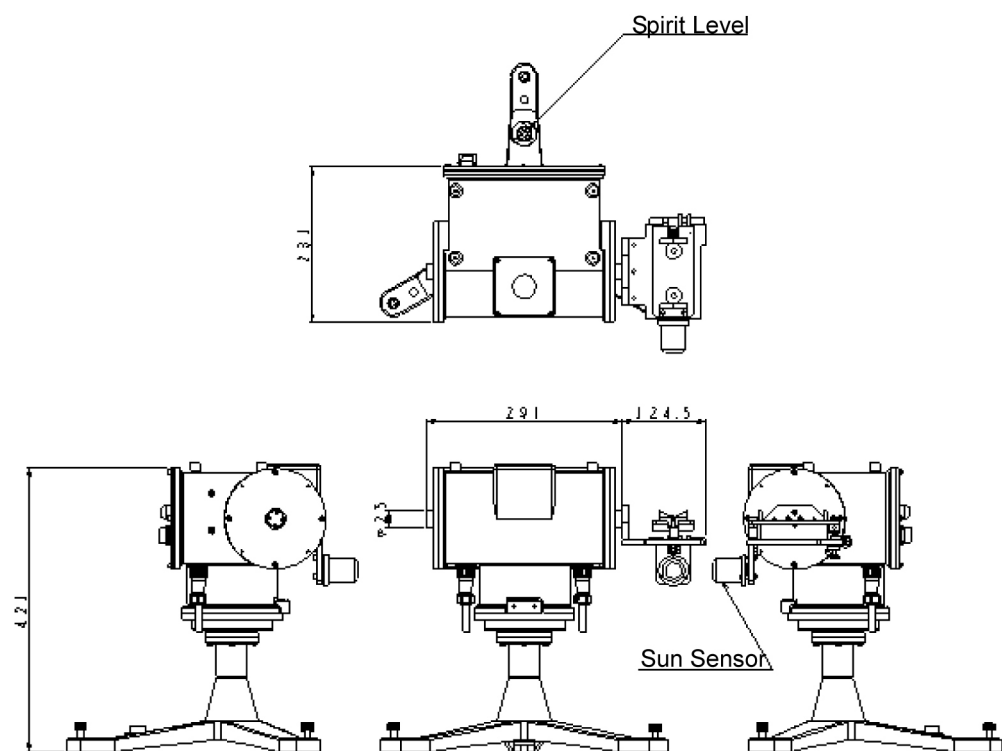
## Description

EKO Instruments high precision STR sun trackers provide high tracking reliability, enhanced functionality with fully automated set up procedure through a built in GPS receiver. The compact sun trackers are perfectly suited to support all kinds of measurement sensors to measure global, diffuse and direct radiation. The sun trackers come with a small tripod that offers a stable surface for the measurement equipment and adjustable pyrheliometer mount for the fine alignment. Various mounting kits are available to accommodate the MS pyranometer series or other types of pyrheliometers.

From sun rise to sun set the compact EKO sun tracker guarantees accurate sun tracking and pointing of the attached solar sensors. The 2-axis tracker automatically adjusts to the sun's position by the sun sensor closed-loop control system, even if the tracker is not oriented or leveled properly. When the sun is absent the sun tracker will follow the solar path by accurately calculating its position. As soon as the sun appears the radiometers will be in the proper position to capture radiation. The STR-series can be fully controlled through the so called open command protocol, which gives the flexibility to monitor and control its position by sending the operating commands.

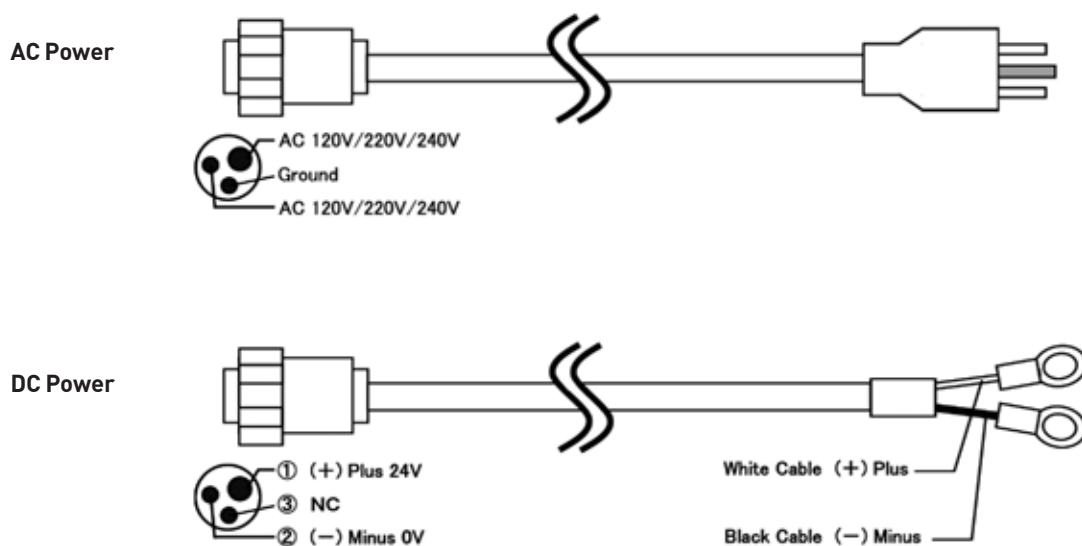
When AC power is not available on site a 24 VDC low power version can be used to run the EKO sun tracker from a solar powered battery system. Due to its efficient motor / Harmonic Drive® design, the power consumption is only 10W for STR-21G and STR-22G (DC models). Harmonic-Drive® is one of the most reliable zero backlash drive systems which does not require any maintenance.

## Schematic



**Specifications**

	Sun Tracker STR-21G	Sun Tracker STR-22G
Order No.	AC model: S64730 DC model: S64740	AC model: S64710 DC model: S64720
Torque	12Nm	24 (12+12) Nm
Motor	Stepping Motor	
Driving method	HarmonicDrive®	
Accuracy	<0.01° (Solar Elevation 0 ... 87°)	
Angular resolution	0.009°	
Rotation angle	Elevation-angle (-15 ... +95°) Azimuth-angle (0 ... 180°)	
Payload	7kg balanced	15kg balanced
Sun-sensor tracking accuracy	±0.01°	
Sun-sensor field of view	±15° (Full view 30°)	
GPS sensor positioning start time	~5min (depends on the receiving condition)	
Operating temperature	-40 ... +50°C (-30 ... +50°C at cold start)	
Communication	RS232C, 9600bps, 8N1	
Power consumption	AC model: 100 ... 240V AC, 50/60Hz, 13W DC: model: 18 ... 30V DC, 10W	
Protection	IP65	
Dimension (main body + tripod)	430 x 380 x 440mm (WDH)	430 x 380 x 440mm (WDH)
Weight (main body + tripod)	14.5kg	15.5kg
Cable length	10m	10m

**Power supply**


Last Modification: 03 April 2013