

## Solar Monitoring System SMS Direct/Diffuse/Global



### Features

- STR-22G Sun Tracker
- MB-121 Shading Assembly plus Mounting plate
- MS-802 Secondary Standard Pyranometer (Diffuse Irradiance)
- MS-56 DNI Sensor (Direct Irradiance)
- CR-1000 DAQ System

EKO's Solar Monitoring Stations, referred to as SMS Direct/Diffuse/Global, is a dedicated measurement system to perform the best possible Solar radiation measurements of the three different components (Direct, Diffuse and Global horizontal).

Note that the global pyranometer is not included, since the global radiation is composed by the sum of the cosine weighted direct and diffuse. The reason not to include a global radiation pyranometer is simple.

Global radiation is based on the two components, basically direct and diffuse. During clear days about 80% of the radiation is direct, during clouded days it will be the opposite. Generally pyrheliometers are considered to have a superior performance (<1% measurement uncertainty) compared pyranometer which have generally larger errors (Cosine error, Zero offsets, temperature dependency). Therefore the most accurate measurement solution can be created based on the sum component method.

### Specifications

#### System items

| # | Item  | Function                 |
|---|---|--------------------------|
| 1 | MS-802 Secondary Standard Pyranometer             | Diffuse Irradiance (DHI) |
| 2 | MS-56 DNI Sensor                                  | Direct Irradiance (DNI)  |
| 3 | STR-22G   | Sun Tracker              |
| 4 | MB-121 One ball shading assembly + Mounting plate | Shading Pyranometer      |
| 5 | CR-1000 DAQ                                       | Data Acquisition system  |