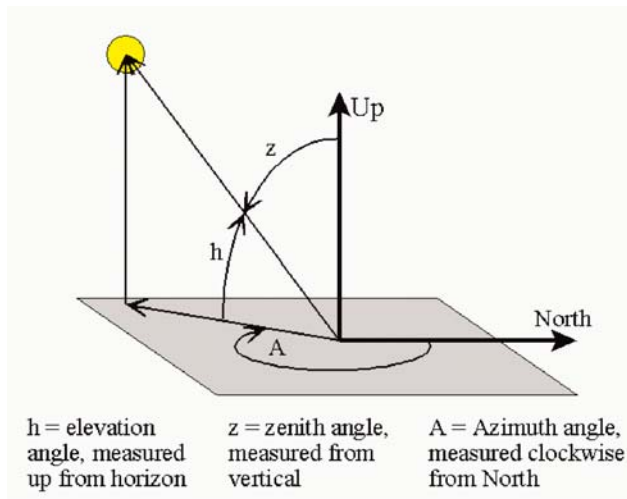


Solar Cube

Precision Solar Tracking & Measurement



The IMO Solar Cube has been developed as a ground breaking, easy to set up solar tracking and measurement controller with the flexibility to adapt to any installation.



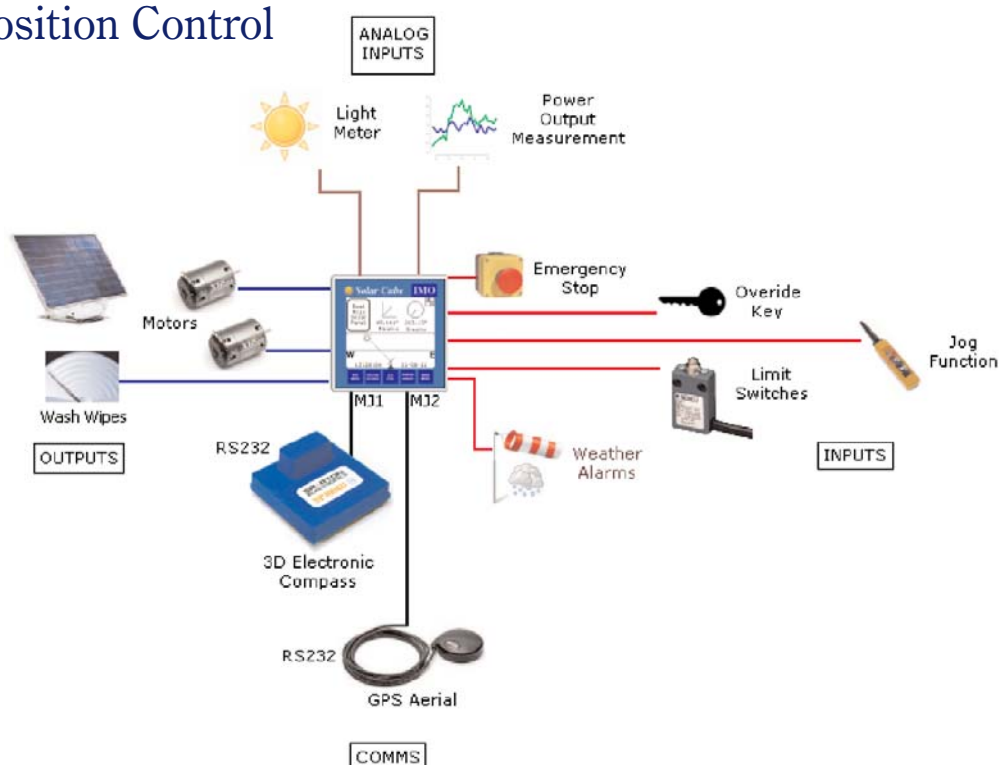
The Solar Cube is an off the shelf controller designed for use on either one or two axis solar panel installations to track the sun's movement and provide optimum panel (or array) positioning. The sun's position is calculated using the local time and date comparing this with the longitude and latitude location of the solar array. From this data the Solar Cube calculates the 'zenith angle' and the 'azimuth angle', which together exactly specify the position of the sun in the sky to within 0.01°.

To position the array the Solar Cube uses feedback from an electronic compass device connected via RS232 or RS485 which then activates the solar array's actuators until the correct position is reached. The compass is mounted directly on the array frame to give accurate positioning information.

With the option of GPS positioning or manual inputting of the array's location, the Solar Cube is easy to setup anywhere in the world. The Solar Cube is a competitive solution for controlling each array or it can be configured to control up to 4 arrays from one controller providing additional savings. Options for feedback and control from a single control station or via a web server are also available.

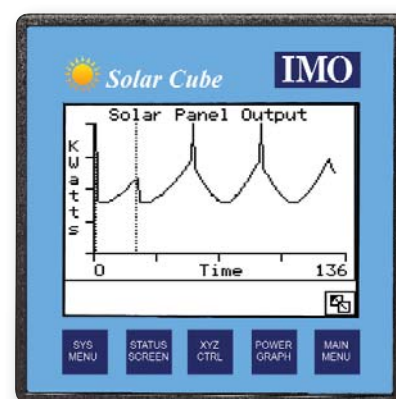
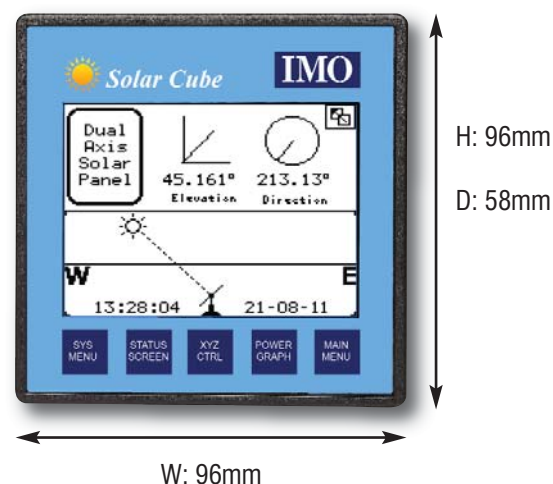
Solar Cube also offers data logging facilities using its own internal Micro SD card. Power output can be logged continually to produce daily, monthly and yearly figures. Revenues can be calculated along with CO2 reduction figures.

Solar Panel Position Control



Solar Cube Key Features

- 3.5" Monochrome Touch Screen
- 5 Pre-programmed function keys
- Built-in sun positioning algorithm
- 3D Compass input for accurate positioning
- Automatic location and clock updates with GPS
- MicroSD card for data logging
- Password security for all settings
- Error based adjustment with configurable error values for each axis
- Configurable minimum and maximum adjustment angles
- Configurable safety cut-out system
- Configurable twilight settings (returns to morning position automatically)
- Single Axis supports Azimuth or Zenith tracking
- Supports custom inverter serial communications
- GPRS and Ethernet Remote Access options available
- Emergency Stop input
- Manual Jog function
- Manual Override key
- Optional Ice and Wind Sensor inputs
- Four motor outputs (For 2 Axis Control)
- Limit Switch inputs for safety cut out
- Optional Washer Control output
- Analog input for power output measurement (CT Connection)
- Optional analog input for light level sensing
- IP65 (NEMA4) CE, cUL, UL
- 10-30VDC supply



Solar Cube Data Logging

- Total kWh produced to date
- Total kWh produced today
- Current Power Output graph (kW against time)
- Yesterday's Power Output graph
- Yield Values for last 31 days (kWh against days)
- Yield Values for last 12 months (kWh against months)
- Specific Annual Yield

Part Numbers

Single Array

Part Number	Description
SOLARCUBE-1A	Single Array Solar Tracker, 1 or 2 axis configurable
COMPASS-485	3D Positional Compass
OEM GPS RECEIVER	RS232 GPS Receiver

Four Array

Part Number	Description
SOLARCUBE-4A	Four Array Solar Tracker, 1 or 2 axis configurable
SMT-CD-R20-V3 (x3)	Slave Array I/O Repeater
COMPASS-485 (x4)	3D Positional Compass
OEM GPS RECEIVER	RS232 GPS Receiver

Note: Above configuration can be used for each group of 4 Arrays. Where a large number of Arrays need linking a Master Control option is available, call IMO for details.

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