

## Instruction Sheet: Irradiance Sensor

**Part Number:** AQ08304  
**Description:** ECODRIVE Irradiance Sensor  
**Compatibility:** ECODRIVE 8000  
**Kit Includes:** 1x Irradiance Sensor with 5m cable  
Mounting Bracket  
**Document:** IM00175 RevB  
(includes drawing DG01216 – mounting instructions)

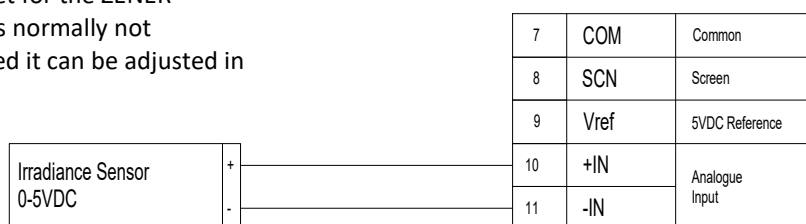


### Summary:

The irradiance sensor is required for the ECODRIVE to operate in Solar + AC mode to provide automatic switching of an auxiliary AC supply under low solar conditions. The irradiance sensor provides a 0-5VDC output representing approx. 0-1562w/m<sup>2</sup>.

When the 'SOLAR + AC' application is loaded the analogue input is programmed to accept an irradiance sensor into analogue input AI(10,11).

The default Irradiance scale has been preset for the ZENER irradiance sensor and further adjustment is normally not required. However, if adjustment is required it can be adjusted in the 'Applications' config menu.



### Installation:

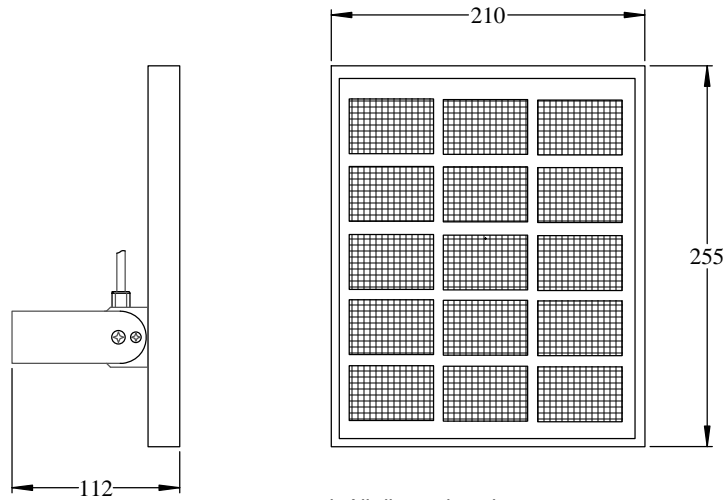
- It is critical to mount the irradiance sensor in the same 'plane' as the solar array, ideally in the centre of the array for best operation with cloud movement.
- Alignment errors of even a few degrees will be significant at the ends of the day.
- A single irradiance sensor may not be suitable for systems with PV arrays at different angles in sections of different angles or where subject to partial shading is an issue.
- Connect the irradiance sensor into the analogue input of the ECODRIVE, terminals 10 & 11. Cables are labelled '+' & '-'. Ensure the correct polarity, +ve to terminal 10 and -ve to terminal 11.
- Check the Irradiance sensor feedback (refer to ECODRIVE supplement manual (p26)
- Ensure the irradiance sensor is clean & operating correctly at all times.

### IMPORTANT NOTE: Operating the ECODRIVE with an Auxiliary AC Supply

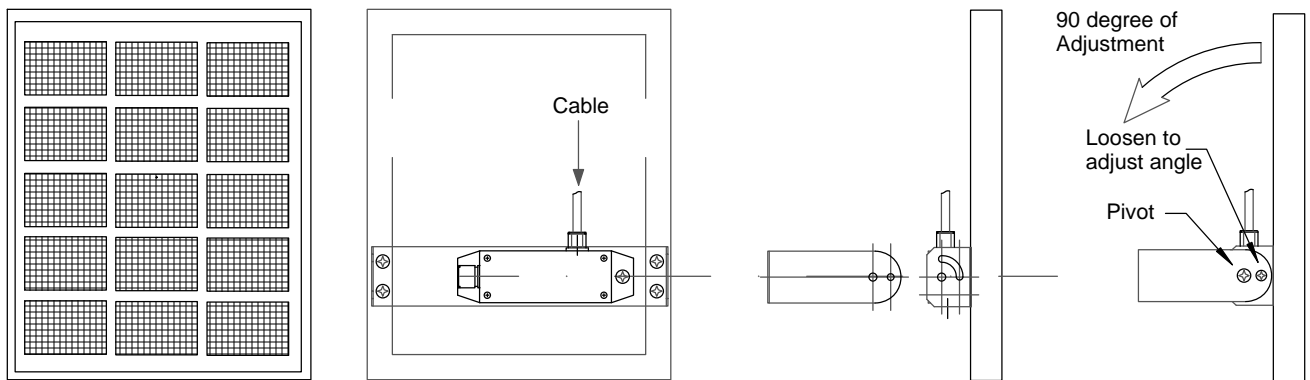
When an auxiliary supply is to be used with the ECODRIVE, Blocking Diode (Part No. AQ08300) must be installed on each string of the PV array. DC (AC) Over Voltage & PV Earth Fault protection must also be installed which isolates either the AC, DC supply or both AC & DC, if a fault condition is detected. This must include a visual or audible alarm in compliance with AS5033. Failure to follow the above may result in damage and void your warranty.

Refer to the supplement manual, ZENER 8000 Manual and all relevant standards regarding the connection of an AC supply & earthing.

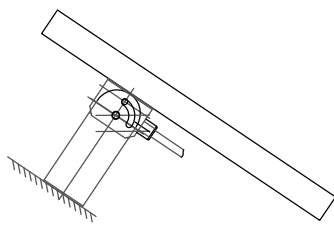
# Irradiance Sensor Assembly/Installation



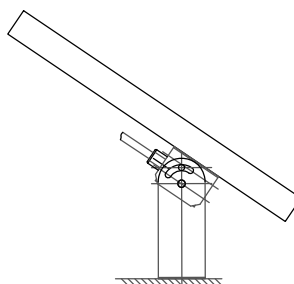
- i. All dimensions in mm
- ii. Dimensions are approximate and may change without notice



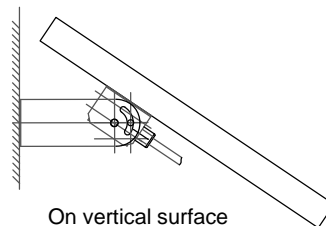
The irradiance sensor should be installed in the same plane (same angle) as the array  
**AND**  
 Ideally in the centre of the array.



In same plane as array



On horizontal surface



On vertical surface

ITEM No.	IRRADIANCE SENSOR	
ITEM No.	AQ08304	
DWG DATE	29/09/21	
DRAWING NUMBER	REV.	
DG01216	C	