Why is I-V curve tracing important?

A PV array is a complex electrical system and it is not unusual for problems to occur during the lifetime of the installation. It is essential to test the system fully when it is first installed and then periodically thereafter. Testing will reveal problems that may have developed and will ensure that the system is operating safely and at its optimum performance. Traditionally, PV arrays have been tested by measuring short circuit current, open circuit voltage and insulation resistance. However, these tests do not reveal the whole picture. For example, a single bypass diode failure in a large string will cause a significant drop in power output but may not be detected by measuring the string's open circuit voltage. Only by measuring the I-V curve of the string will the problem be revealed.

I-V curve tracing is the ideal way to test PV arrays. The I-V curve data can be used to confirm that the system is operating as expected for the environmental conditions at the time of measurement. Correction algorithms are then used for a direct comparison with the rating plate figures.

If you require more help, please contact us at https://www.seaward.com/gb/enquiry/.

15-18 Bracken Hill, South West Industrial Estate, Peterlee, County Durham, SR8 2SW, United Kingdom
t: +44 (0) 191 586 3511 | f: +44 (0) 191 586 0227 | e: sales@seaward.com
seaward.com