# Parallel arrays into one MPPT – Sungrow Inverters

***Disclaimer***

*The material in this document has been prepared by Sungrow Australia Group Pty. Ltd. ABN 76 168 258 679 and is intended as a guideline to assist solar installers for troubleshooting. It is not a statement or advice on any of the Electrical or Solar Industry standards or guidelines. Please observe all OH&S regulations when working on Sungrow equipment.*

## Different orientation PV arrays connected to the same MPPT

*Applicability: SG8K-D, SG10KTL-MT, SG15KTL-M, SG20KTL-M, SG7.0RT, SG8.0RT, SG10RT, SG15RT, SG20RT, SH10RT, SG30CX, SG50CX, and SG110CX*

The following statement from Sungrow is in relation to parallel PV arrays with different azimuth and/or tilt angles being connected in parallel to the same MPPT.

The CEC install and supervise guidelines for accredited installers V13 April 2019 and later state that:

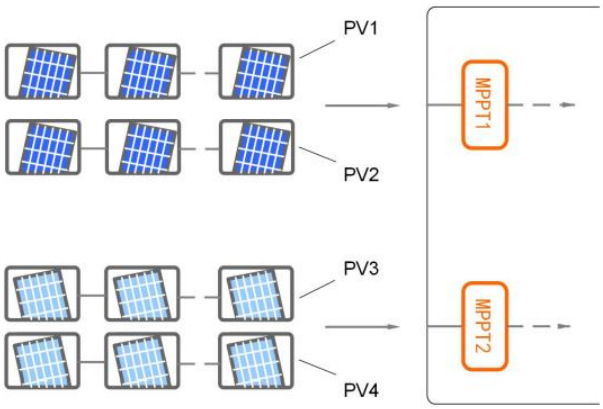
***"7.1.4 Unless specified by the CEC system designer, the installer shall not install two parallel strings, connected to the same Maximum Power Point Tracker (MPPT) input at the inverter, installed on different orientations (e.g. east and west)."***

**NOTE**: *Some manufacturers will not guarantee inverter performance where parallel strings are installed on different orientations. The system designer shall confirm in writing that this arrangement is acceptable with the inverter manufacturer.*

Sungrow Australia will recognise that designers / Installers may connect two different orientation PV arrays into one MPPT, **'only' on the above inverter models and 'only' in the following circumstances**:

- Both arrays and strings are electrically identical.
- The arrays and wiring conform to the most recent AS/NZS5033 standard.

- An accredited CEC designer has signed off on the design.
- A CEC accredited Installer installs and commissions the system in accordance with the current applicable standards and guidelines.
- The open circuit voltage and short circuit total currents do not exceed that on the official and current data sheet for each model.
- The Isc does not exceed the max current rating of the input or MC4 connector.
- Two different arrays should only be connected where an MPPT has two or more inputs, using both inputs (see diagram below). Some inverters have one MPPT with one input, and one MPPT with two inputs. Only parallel the arrays where the MPPT has two inputs. Do not parallel into one input.
- The retailer and designer accept that max efficiency specified on the data sheet may no longer be applicable and advise the End User in writing.
- That the above is specified on all relevant certificates of compliance including STC's forms.
- That all parties accept that Sungrow does not guarantee peak performance in the above configuration.




*Picture 1 – Ensure each string is per input.*

If the issue persists after following above procedures, please take photos testing on site and contact Sungrow Service Department on 1800 786 476 or email to service@sungrowpower.com.au, Monday- Friday 9am - 5pm (AEDT).