

## Mating Microinverters with PV Modules for Correct Polarity

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### **Purpose**

To provide clear guidance for mating microinverters with various DC connector types with PV modules (or adapter cables) to ensure correct polarity between the microinverter and the PV module.

### **Background**

Microinverters are manufactured with two types of DC connectors for mating with PV modules. For example, microinverters ship with the following connector types:

1. MC-4 compatible locking connectors (part number suffix S12)
2. Tyco style locking connectors (part number suffix S13)

*The polarity of the DC connectors on the microinverter varies with the type of connector.*

When your *microinverters* are built with **MC-4 compatible (S12) connectors**:

- Positive DC output of the PV module (+) connects to microinverter connector *labeled* negative (-).

When your *microinverters* are built with **Tyco (S13) connectors**:

- Positive DC output of the PV module (+) connects to microinverter connector *labeled* positive (+)

### **Conclusion**

- As we see above, *connector labels* do not always map to the corresponding positive or negative input of the microinverter.
- PV module *connector labels* may not map to the corresponding output of the PV module either.
- Microinverters should be ordered with the correct connectors for your PV modules.
- *But if re-termination of your module's connectors is required, it is critical that the positive output of the module be identified from labeling on the PV junction box.* Connector labels can be misleading.

It is critical to follow these guidelines to avoid reversing the polarity between your PV module and the microinverter.

### **Example**

Mating microinverter with MC-4 connectors to PV module with MC-3 connectors using an adapter cable.

