

# Export Power Manager Troubleshooting

This serves as a troubleshooting guide for the Solis External Export Power Manager

## 1. Limiting the inverter when the system is loaded

### Description

The inverters are being limited even when the system is clearly loaded, causing much lower generation than expected.

### Cause

The CTs (Current Transformers or clamps) are placed the wrong way around and is causing the EPM (Export Power Manager) to think the system is exporting power when it is importing that amount. Therefore, telling the inverters to reduce their generation falsely.

### How to identify

Turn off all the inverters and make sure the system has load (e.g. from the property). Confirm the power reading on the EPM and make sure the power reads a negative value. If the EPM reads a positive value for a load the CTs are placed the wrong way around.

### Solution

Rotate the CTs.

## 2. Fail safe alarm-01

### Description

The EPM is reporting an alarm of fail-safe-01.

### Cause

The communications between the EPM and the inverters is failing. The following could be causing the communications to be failing:

1. The EPM could be looking for more inverters than the amount you have on the system
2. The inverters have duplicate addresses
3. The physical connections for the RS485 is broken or bad

### How to identify

The following is how to identify the fault:

1. Check the setpoint in advanced settings called "Inverter Qty. Set" and make sure it matches the number of inverters on the system
2. Check the addresses in settings for each inverter (On inverter LCD click, Enter, click Settings, click Set Address)
3. Use a cable tester

### Solution

The following is the solutions:

1. Change the "Qty Inverter set" to the correct number
2. Set the addresses for each inverter to a unique number. (eg. Inverter 1,2,3 etc)
3. Fix or replace the cable

## 3. Exporting more power than the setpoint

### Description

The system is exporting more power than the setpoint "backflow power". *This only happens if the setpoint of backflow power is set to 0W.*

## Cause

This happens when the CTs are placed the wrong way around and the inverters wakes up. They cause a negative reading on the EPM which the EPM understands as load, so it doesn't even tell the inverters to reduce their generation.

## How to identify

Turn off all the inverters and make sure the system is loaded. Confirm the power reading on the EPM and make sure the power reads a negative value. If the EPM reads a positive value for a load the CTs are placed the wrong way around.

## Solution

Rotate the CTs.

## 4. Fail safe alarm-02

### Description

The EPM is reporting an alarm of fail-safe-02.

### Cause

There is a problem with the CTs. The following could be causing the CTs to be failing:

1. The wires to the CTs are broken or bad
2. One or more of the CTs are not properly clamped
3. One or more of the CTs are not around their relevant incoming grid connections
4. The CT clamps are the wrong way around

### How to identify

The following is how to identify the fault:

1. Check for any visible damage on the CT wires or if the current reading for that phase is zero on the display
2. Check that each of the CTs are clipped closed
3. Make sure all the CTs are around their relevant incoming grid connections
4. Turn off all the inverters and make sure the system is loaded. Read the power reading on the EPM and make sure the power reads a negative value. If the EPM reads a positive value for a load the CTs are placed the wrong way around.

### Solution

The following is the solutions:

1. Replace the cable or contact Solis to get a new clamp sent to you
2. Close all the CTs correctly
3. Put the CTs on their relevant grid connections
4. Rotate all the CT clamps

## 5. The Active Power doesn't match the Active Power expected

### Description

The active power showing on the EPM display doesn't match some other active power meter.

### Cause

The voltage measurements for each phase doesn't match their relevant current measurements.

### How to identify

Trace each of the CT clamps wires to where you put the voltage wires.

### Solution

Swap the CT clamps you found to be incorrectly placed.