

Solar System Issue

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Date: 2024 - 10 - 12

At around 15:21 today, I received an email from my dashboard monitor indicating that I lost grid AC power, and because the batteries SOC is at 94%, I got a warning there is too much solar power. I immediately noticed that the solar power is not charging the batteries, which is what I expect if I lost grid AC.

Since there is no power throttling with the SolarEdge inverters and they are generating a combine output of 6KW and the house is only using a little bit over 1KW, this means InsightHome is not reporting accurate numbers any more. The power must be being fed back to the grid, and I did not lose grid power.

I went down into the basement and noticed that both inverters were **OFF**, and the **EVENT LED** was blinking. I was not able to clear the event on the physical inverters, so I manually powered on both inverters and I proceeded to check the InsightHome web page. This is when I noticed the 90 and 91 warnings. Both are BMS communication related. Upon closer inspection in the Historical section, I also found F48 was the first fault that happened today. See the [event log](#) for more details.

I noticed that I am unable to clear the 90 and 91 warnings with InsightHome, because they continue to reoccur. I proceeded to disconnect the DC switches between the Inverters and the Batteries, thinking that this will reinitialize the BMS communication. This was unsuccessful.

I then power off the batteries by turning the master battery ON/OFF switch to OFF. After a couple seconds, I switched it back to ON. I then push the red button on the master battery to power on all the batteries. This was also unsuccessful in re-establishing BMS communication.

I went back to the InsightHome web site and put the primary inverter in **STANDBY**. I went back to the inverters and restarted both manually. Once everything is back up and running, the BMS communication is re-established.

In the future, I will leave the system for 30 minutes before doing anything to see if the inverters will recover from the lost in communication. At least, I now know how to manually recover:

- Turn off the battery;
- Turn on the battery and push the red button on the master battery;
- Place the primary inverter on **STANDBY**;
- Restart both Schneider inverters;
- InsightHome should be restarted, and everything should be back to normal

Event Type	Time	Device Type	Device Id	Id	Name	Description
Warning	2024-10-12 15:37	XW	1686870	92	Gateway Comms Lost	Cause: Communications is lost from the Conext Gateway device. Solution: Check the communications cable between Conext Gateway and the external BMS.
Warning	2024-10-12 15:37	XW	1686870	91	SOC Level Lost	Cause: A new State of Charge measurement has not been received for a period of time. Solution: Check the communications cable between Conext Gateway and the external BMS.
Warning	2024-10-12 15:37	XW	1686870	90	External BMS Disconnected	Cause: Communication has been lost with the Battery Management System of the Li-ion battery. Solution: Check the communication network connections to the Li-ion battery. Contact the manufacturer of the Battery Management System if a connection problem cannot be found.
Fault	2024-10-12 15:37	XW	1684605	66	System Configuration Fault	Cause: Multi-Unit Configuration settings are incorrect. Solution: Make sure only one unit is configured as the primary. For three-phase installations, make sure that only one unit on each phase is configured as the primary. Make sure each unit has a unique Device Number and that Inverter Mode and Connections have been configured correctly.
Fault	2024-10-12 15:32	XW	1686870	49	DC Over Voltage	Cause: Battery voltage is (BattV), which has exceeded the High Battery Cut Out level of (HBCO). Solution: The fault can occur when batteries are disconnected at the DC breaker while the inverter/charger is operating. Solution: Clear the fault and attempt restart. Make sure battery voltage is below 29 VDC (24 V system) or 58 VDC (48 V system) at the inverter/charger DC input terminals. Check all other charging source outputs and battery cables. Make sure that batteries are connected or that your DC source is regulated below your high battery cut out or increase your Hi Batt Cut Out setting.
Fault	2024-10-12 15:32	XW	1686870	48	DC Under Voltage	Cause: Battery voltage is (BattV), which is below the Low Battery Cut Out level of (LBCO). Solution: Check for the correct battery voltage at the inverter's DC input terminals. Check for an external DC load on the batteries. Check condition of batteries and recharge if possible.
Warning	2024-10-12 15:24	XW	1684605	91	SOC Level Lost	Cause: A new State of Charge measurement has not been received for a period of time. Solution: Check the communications cable between Conext Gateway and the external BMS.
Warning	2024-10-12 15:24	XW	1684605	90	External BMS Disconnected	Cause: Communication has been lost with the Battery Management System of the Li-ion battery. Solution: Check the communication network connections to the Li-ion battery. Contact the manufacturer of the Battery Management System if a connection problem cannot be found.
Warning	2024-10-12 15:23	XW	1684605	91	SOC Level Lost	Cause: A new State of Charge measurement has not been received for a period of time. Solution: Check the communications cable between Conext Gateway and the external BMS.
Warning	2024-10-12 15:23	XW	1684605	90	External BMS Disconnected	Cause: Communication has been lost with the Battery Management System of the Li-ion battery. Solution: Check the communication network connections to the Li-ion battery. Contact the manufacturer of the Battery Management System if a connection problem cannot be found.
Warning	2024-10-12 15:21	XW	1684605	91	SOC Level Lost	Cause: A new State of Charge measurement has not been received for a period of time. Solution: Check the communications cable between Conext Gateway and the external BMS.
Fault	2024-10-12 15:21	XW	1686870	48	DC Under Voltage	Cause: Battery voltage is (BattV), which is below the Low Battery Cut Out level of (LBCO). Solution: Check for the correct battery voltage at the inverter's DC input terminals. Check for an external DC load on the batteries. Check condition of batteries and recharge if possible.
Fault	2024-10-12 15:21	XW	1684605	48	DC Under Voltage	Cause: Battery voltage is (BattV), which is below the Low Battery Cut Out level of (LBCO). Solution: Check for the correct battery voltage at the inverter's DC input terminals. Check for an external DC load on the batteries. Check condition of batteries and recharge if possible.