

**NORMAL OPERATION LCD DISPLAYS**

	LCD Display	Description	Remedy
1	Sumpro Status NORMAL	The unit is operating off of AC Line power and is functioning normally. ("Sumpro Status - B" indicates that Bump Down Mode is enabled).	Normal
2	Sumpro Status BATTERY BACKUP	The unit is in DC mode and running off of power provided by attached batteries. ("Sumpro Status - B" indicates that Bump Down Mode is enabled).	Normal
3	Sumpro Status BATTERY CHARGING	The unit is charging the batteries. ("Sumpro Status - B" indicates that Bump Down Mode is enabled).	Normal
4	Input Voltage 120V	The input voltage when running off of AC power from the utility.	Normal
5	Battery Current 15.0 A	Current going to the batteries during charging.	Normal
6	Output Current 5.0 A	Current going to the connected load while in DC mode.	Normal
7	Battery Voltage 26.7 V	Battery voltage when batteries are deemed present.	Normal
8	Battery Capacity 91%	Battery capacity when batteries are deemed present. Capacity is calculated based on battery voltage alone. While inverting, the battery capacity can drop 15-20% when load is connected and running.	Normal
9	AC Transfer In 10 S	The unit has detected good AC power from the utility and has begun the count down to transfer back to AC power from DC mode.	Normal

**ALARM & FAULT CODE LCD DISPLAYS**

	LCD Display	Description	Remedy
1	Batteries Not Installed	The unit will detect that batteries are connected by installing fully charged batteries or if it draws sufficient current while charging. Once the unit detects that batteries are present, the unit will always assume batteries are connected unless the unit is completely powered off.	Install batteries of the same age, make and model. Once the unit detects that batteries are present, the unit will always assume batteries are connected unless the unit is completely powered off.
2	AC Input Voltage LOST	The unit has detected a loss of AC power from the utility and has switched to DC mode.	The unit must detect good AC voltage before switching back to AC mode.
3	AC Input Voltage UNDERVOLTAGE	The unit has detected an undervoltage condition and has switched to DC mode.	The unit must detect good AC voltage before switching back to AC mode.
4	AC Input Voltage OVERVOLTAGE	The unit has detected an overvoltage condition and has switched to DC mode.	The unit must detect good AC voltage before switching back to AC mode.
5	Invert Lock OFF: 10 S	The unit has suspended DC mode because of a fault condition. The display shows time left before DC mode will resume.	DC mode will resume after the time expires.
6	Charge Lock OFF: 10 S	The unit has suspended battery charging because of a fault condition. The display shows time left before charging start timer can begin.	Battery charging will resume after the timer expires.
7	Cool Lock OFF: 10 S	The unit has suspended battery charging because it needs to cool off for a period of time. The display shows time left before charging start timer can begin.	Battery charging will resume after the timer expires.
8	Fault Lock OFF: 10 S	The unit has entered into a fault condition and has suspended all operations. The display shows time left before operations can begin again.	Normal operation will resume after the timer expires.

	LCD Display	Description	Remedy
9	Sumpro Status INVERT SUSPENDED	The unit has stopped DC mode due to a fault condition. Subsequent screens will state info regarding suspension. ("Sumpro Status - B" indicates that Bump Down Mode is enabled).	The underlying fault condition must clear and the related lock timer must elapse.
10	Sumpro Status FAULTED	The unit has detected a fault condition and has stopped all operations until condition clears and/or necessary time has elapsed since fault.	The underlying fault condition must clear and the related lock timer must elapse.
11	Inverter Current FAULT	The unit has tripped out 3 times on Inverter Current ALARM.	The unit will now remain in a fault condition until power is restored, fault lockout timer elapses, and no Inverter Current ALARM condition is found present the next time the unit goes into DC mode.
12	!!THERMAL TRIP!! CHARGING OFF	The unit experienced a thermal fault while charging the batteries. In this condition, battery charging is locked out and the voltage on outlets may be lost.	This condition will clear once the thermal condition is deemed safe again and fault lockout timer has elapsed.
13	AC Out Voltage FAULT	The unit has tripped out 3 times on AC Out Voltage ALARM.	The unit will now remain in a fault condition until power is restored, fault lockout timer elapses, and no AC Out Voltage ALARM condition is found present the next time the unit inverts.
14	Battery Voltage FAULT	The unit has detected that the battery voltage has dropped down past a critical threshold, causing the unit to permanently stop operating.	Power must be restored and a battery charging cycle attempted.
15	Battery Voltage HIGH	The unit has detected that the battery voltage has exceeded a critical threshold, causing unit to go into alarm.	Battery voltage must return to normal.

	LCD Display	Description	Remedy
16	Inverter Current ALARM	The unit has detected that, while in DC mode, the Output Current has exceeded a critical threshold, causing an alarm and temporary suspension of operation. This is usually caused by big loads turning on while the battery is low.	Wait for lockout timer to elapse and correct condition causing the excessive current.
17	Inverter Current HIGH	The unit has detected that, while in DC mode, the Output Current has exceeded a critical threshold, causing an alarm. This is usually caused by big loads turning on while the battery is low.	Fault will clear when the inverter current returns to normal.
18	Battery Current ALARM	The unit has detected that, while charging the batteries, the Battery Current has exceeded a critical threshold, causing an alarm and locking out battery charging. The time for which battery charging is locked out is increased if Battery Current ALARM occurs 3 or more times.	Wait for charge lockout timer to elapse and correct the underlying cause.
19	Battery Current HIGH	The unit has detected that, while charging the batteries, the Battery Current has exceeded a critical threshold causing an alarm.	Fault will clear when battery current returns to normal.
20	Excess Charging* CHECK BATTERIES	The unit has detected that, while charging the batteries, the Battery Current has exceeded a critical threshold for an excessive amount of time, 6 times or more, causing an alarm and temporarily preventing the unit from charging the batteries.	Battery must stop the charging process normally based on going above proper battery voltage threshold not based on excessive charging time.
21	Excess Charging! CHECK BATTERIES	The unit has detected that, while charging the batteries, the Battery Current has exceeded a critical threshold for an excessive amount of time, 6 times or more, causing an alarm and temporarily preventing the unit from charging the batteries.	Battery must stop the charging process normally based on going above proper battery voltage threshold not based on excessive charging time.

	LCD Display	Description	Remedy
22	Excess Charging CHECK BATTERIES	The unit has detected that, while charging the batteries, excessive current to the batteries has been detected for an excessive amount of time, 6 times or more, causing an alarm and temporarily preventing the unit from charging the batteries.	Battery must stop the charging process normally based on going above proper battery voltage threshold not based on excessive charging time.
23	Over Current ALARM	The unit has detected a current overload condition and has entered a fault condition.	The unit will automatically try to recover from this fault.
24	Batteries 3+ YRS CHANGE BATTERIES	The unit has detected that 3+ yrs has elapsed since batteries first detected.	This alarm condition can only be cleared by a complete powering off of the unit.
25	Temperature FAULT	The unit has detected that the temperature inside the unit has exceeded a critical threshold for an excessive amount of time, causing an alarm and the unit to enter a fault condition.	This condition will clear once the temperature returns to normal.
26	Temp HIGH CHECK FAN	The unit has detected that the temperature inside the unit has exceeded a critical threshold for an excessive amount of time causing alarm.	This condition will clear once temperature returns to normal.
27	DC IN1 Amps HIGH	The unit has detected that the DC IN1 Amp has exceeded a critical threshold for an excessive amount of time causing an alarm.	This condition will clear when DC IN1 Amps return to normal.
28	DC IN2 Amps HIGH	The unit has detected that the DC IN2 Amp has exceeded a critical threshold for an excessive amount of time causing an alarm.	This condition will clear when DC IN2 Amps return to normal.
29	IIC Comm Fail DC Inputs OFF	The unit has detected an internal device failure related to DC Inputs 1 & 2. Charging via DC Inputs is permanently disabled.	Unit should be returned to the manufacturer for service.
30	AC Transfer In Waiting To Sync	The unit is in the process of transferring back to AC power from DC mode.	Clears once transfer is complete.

	LCD Display	Description	Remedy
31	Bump Down Mode DISABLED	The unit's Bump Down Mode is turned off. Bump Down Mode ramps the frequency down and then back up in order to lessen the inrush of the connected load.	This is not typically needed and is disabled by default.
32	Bump Down Mode ENABLED	The unit's Bump Down Mode is turned on. Bump Down Mode ramps the frequency down and then back up in order to lessen the inrush of the connected load.	This is not typically needed and is disabled by default. Contact the manufacturer for technical support.
33	DC Input 1 Info OFF 27.5 V 3.5A	The unit displays all info pertaining to DC Input 1 when charging using power connected to input.	Normal
34	DC Input 2 Info OFF 27.5 V 3.5A	The unit displays all info pertaining to DC Input 2 when charging using power connected to input.	Normal