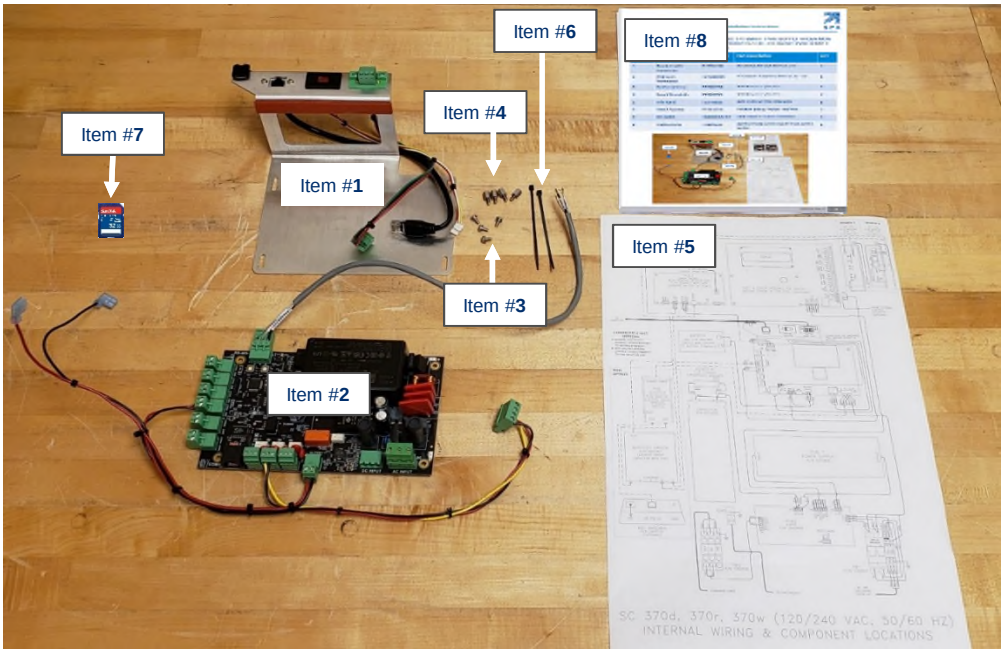
SC 370 SMART POWER SUPPLY WITH GENERATOR MONITORING

1. **INSTALLATION INSTRUCTIONS**
2. **APPENDIX A:** GENERATOR MONITORING CONFIGURATION WITH SMART POWER SUPPLY
3. **APPENDIX B:** SC 370 SMART POWER SUPPLY WITH GEN MON KIT TROUBLESHOOTING GUIDE

Purpose

These instructions cover installation of the SC 370 SMART PWR SUPPLY W/GEN MON KIT into the SC 37X Vanguard Controller. 11000017523 SC 370 SMART PWR SUPPLY W/GEN MON KIT includes all needed parts.

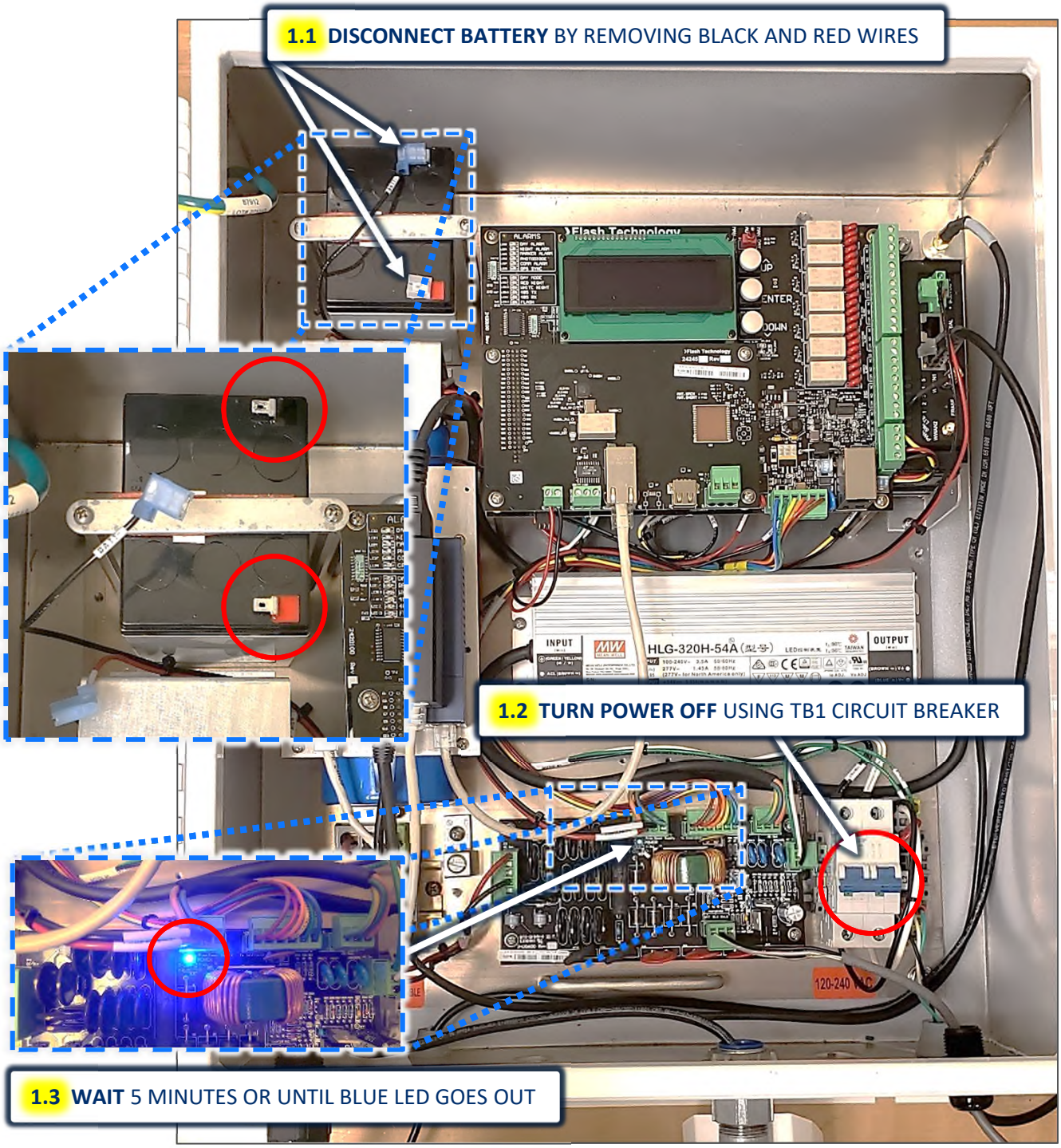
ITEM NO.	PART TYPE	PART NUMBER	PART DESCRIPTION	QTY
1	BRACKET WITH HARNESSES	F137X100	INTERFACE KIT GEN MON SC 37X	1
2	PCB4 WITH HARNESSES	F2428000A	POWER SUPPLY SMART AC/DC 12V TEST/HARNESS	1
3	SCREWS (EXTRA)	F5900736	SCREW 6-32 X 5/16 PPH	4
4	SMALL STANDOFFS	F5903353	SCREW 6-32 X 5/16 PPH	4
5	INFO CARD	F3370105	INFO CARD SC 370X GEN MON	1
6	SMALL TYWRAP	F5901026	TYWRAP SMALL *PLT1M-MO*PAN	2
7	SD CARD	11000015117	VANGUARD SD CARD FIRMWARE	1
8	INSTRUCTIONS	F7904236	INSTRUCTIONS SC370 SMART PWR SUPPLY W/GM	1



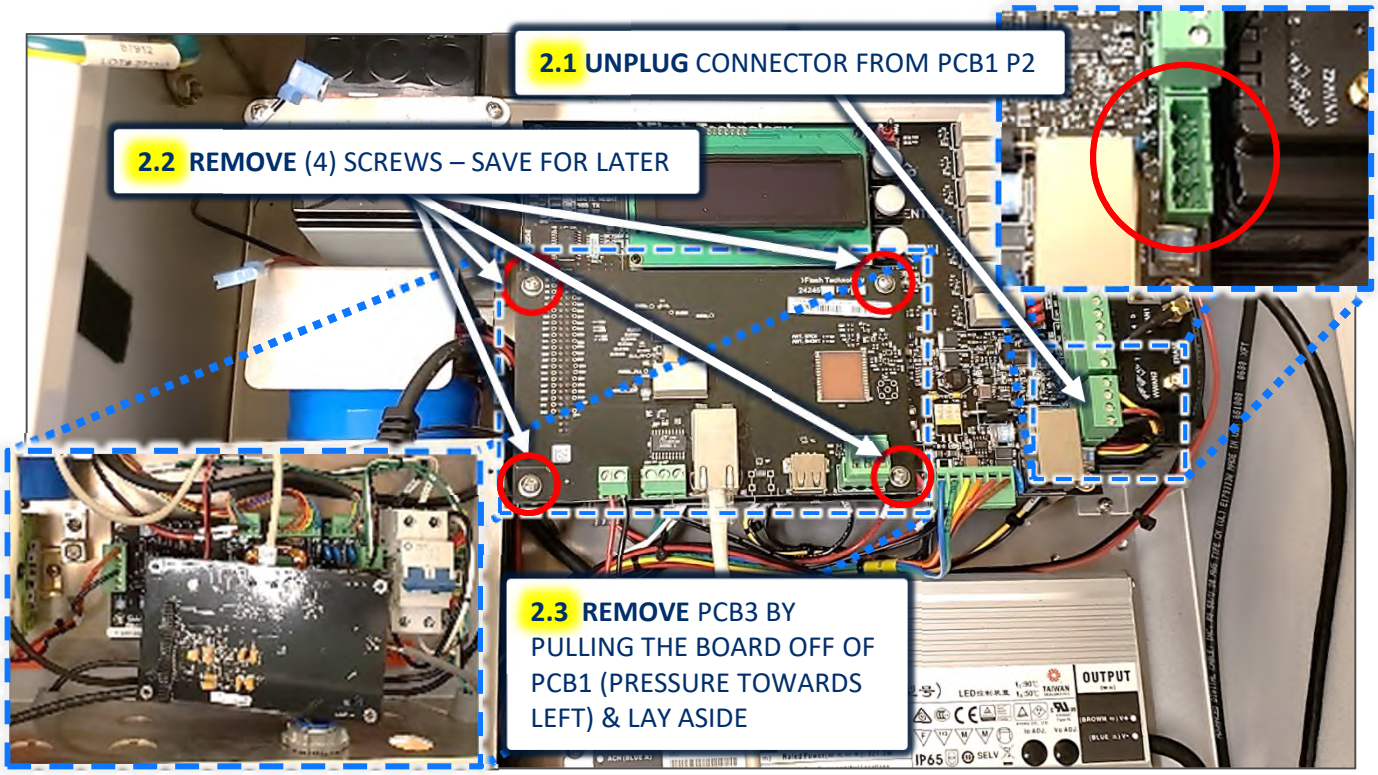
TOOLS NEEDED

- #2 PHILLIPS SCREWDRIVER
- 1/8" FLAT BLADE SCREWDRIVER
- WIRE CUTTERS & STRIPPERS
- ¼" NUT DRIVER

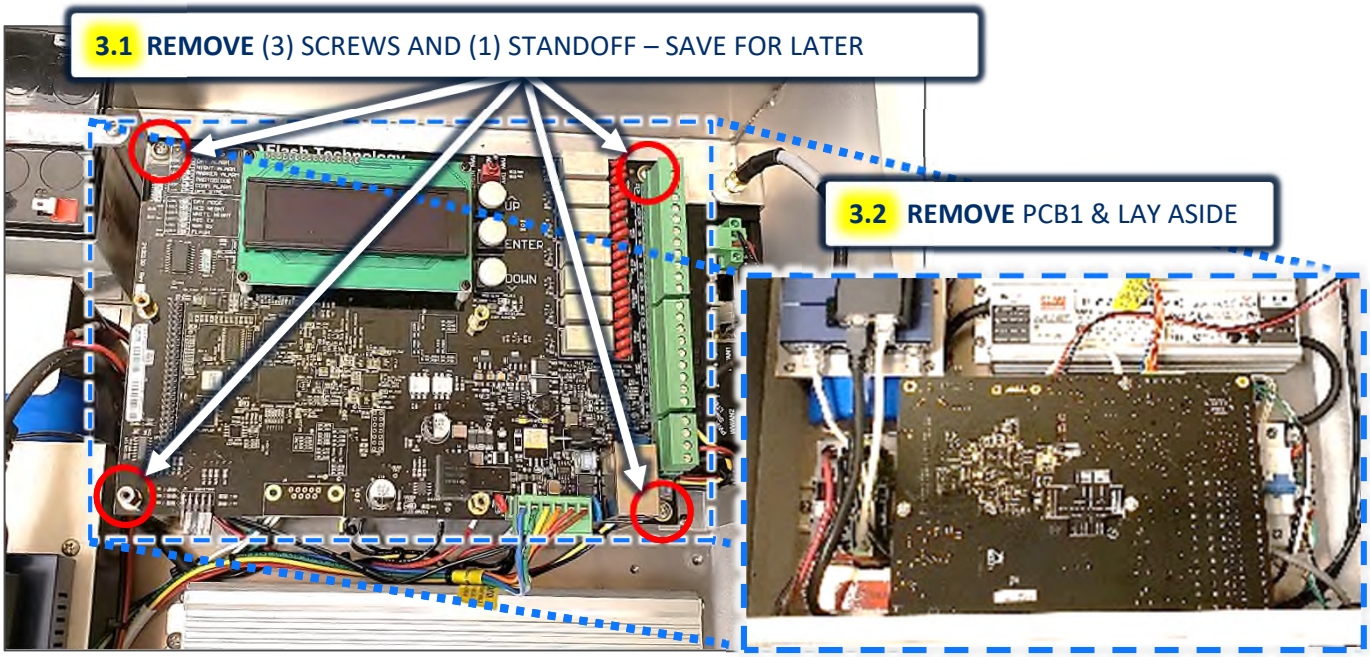
STEP 1: DISCONNECT BATTERY AND TURN OFF POWER TO UNIT



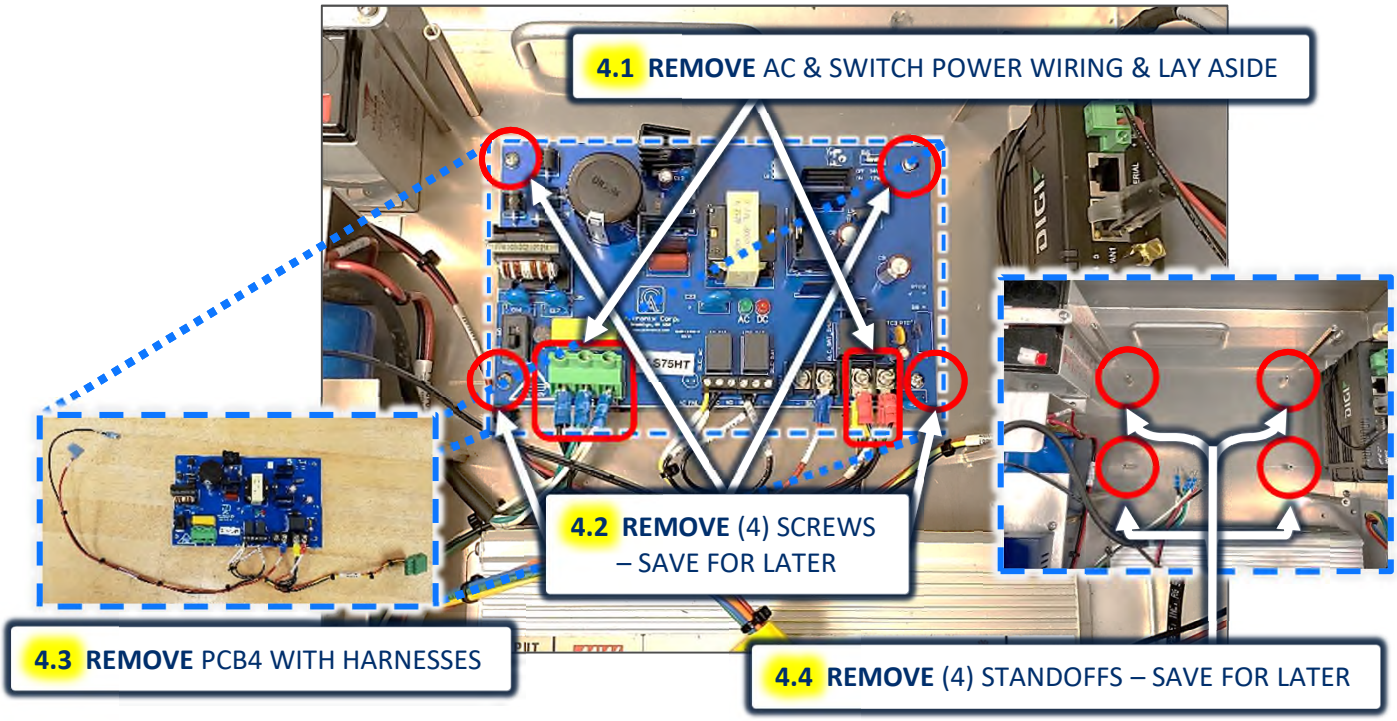
STEP 2: UNPLUG CONNECTOR FROM PCB1 AND REMOVE PCB3



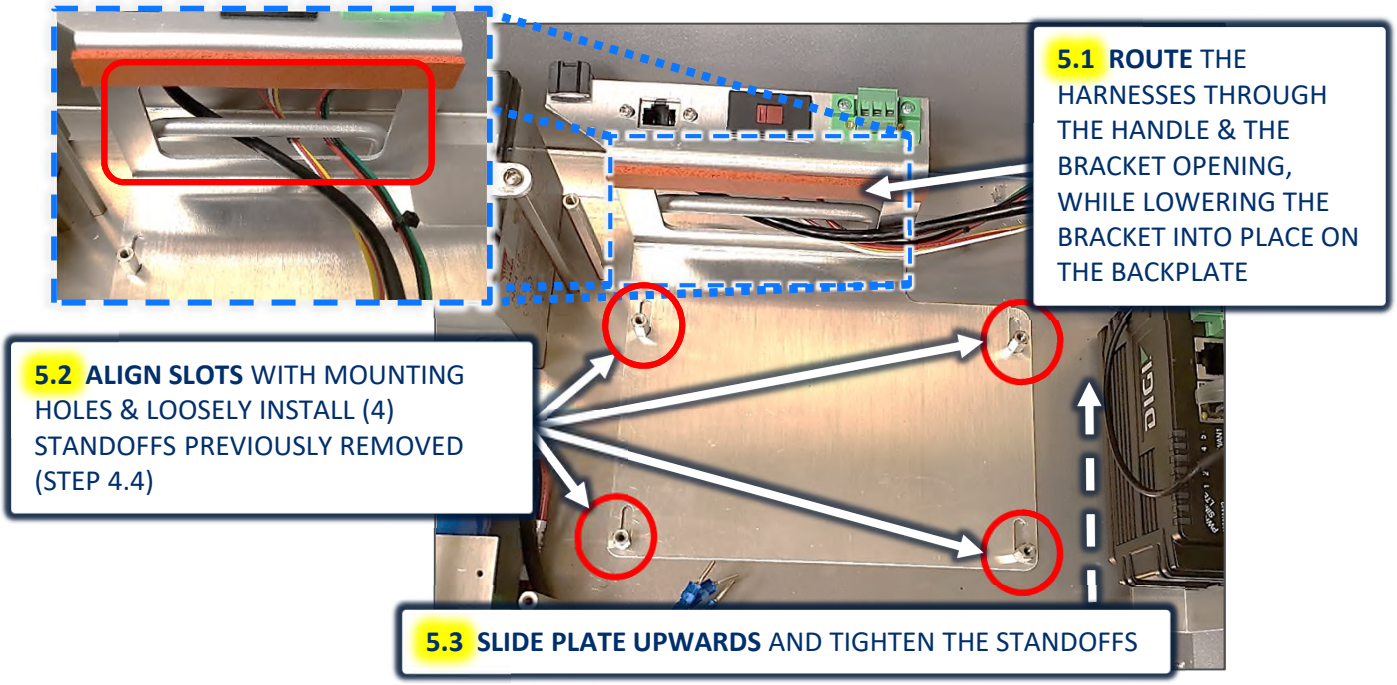
STEP 3: REMOVE PCB1 – SAVE SCREWS & STANDOFF



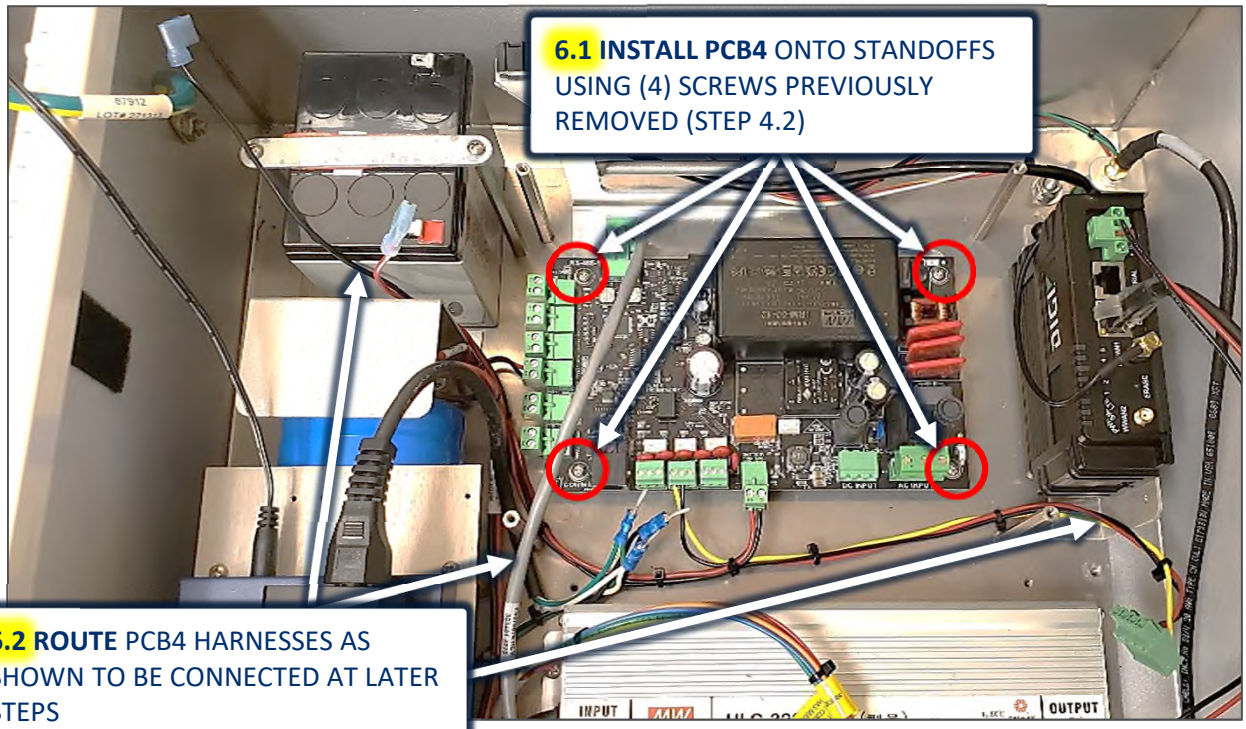
STEP 4: REMOVE PCB4 – SAVE SCREWS & STANDOFFS



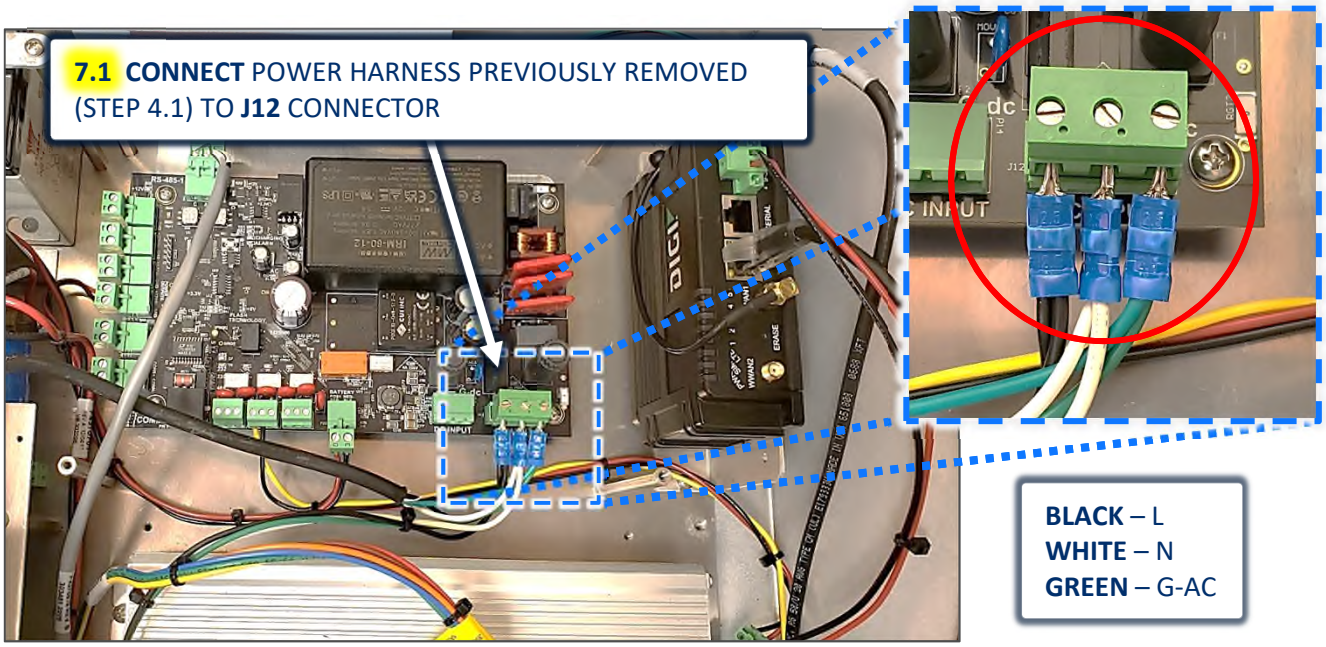
STEP 5: INSTALL ITEM #1 – F137X100, INTERFACE KIT GEN MON SC 37X



STEP 6: INSTALL ITEM #2 – F2428000A, POWER SUPPLY SMART AC/DC 12V TEST/HARNESS

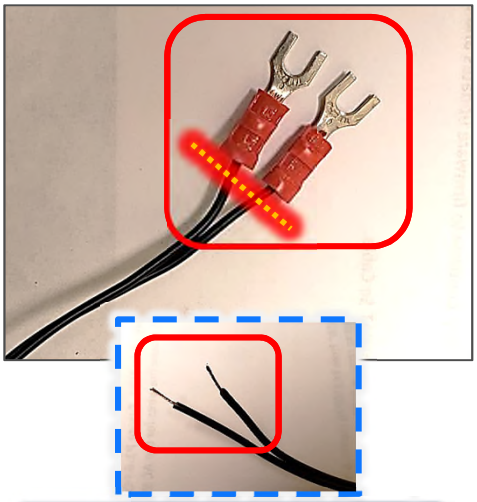


STEP 7: RECONNECT AC POWER HARNESS TO NEW PCB4



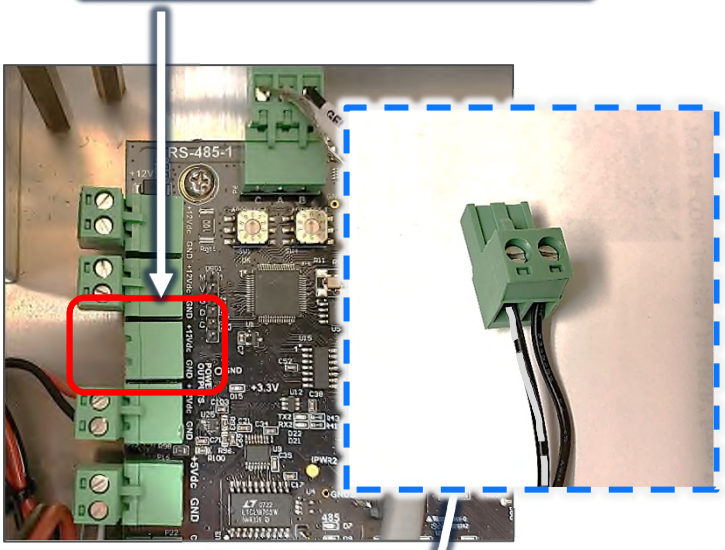
STEP 8: INSTALL PHOENIX CONNECTOR TO SWITCH POWER HARNESS

8.1 **CUT OFF** RED FORK LUGS FROM SWITCH HARNESS PREVIOUSLY REMOVED (STEP 4.1)



8.2 **STRIP WIRE** BACK 0.27”

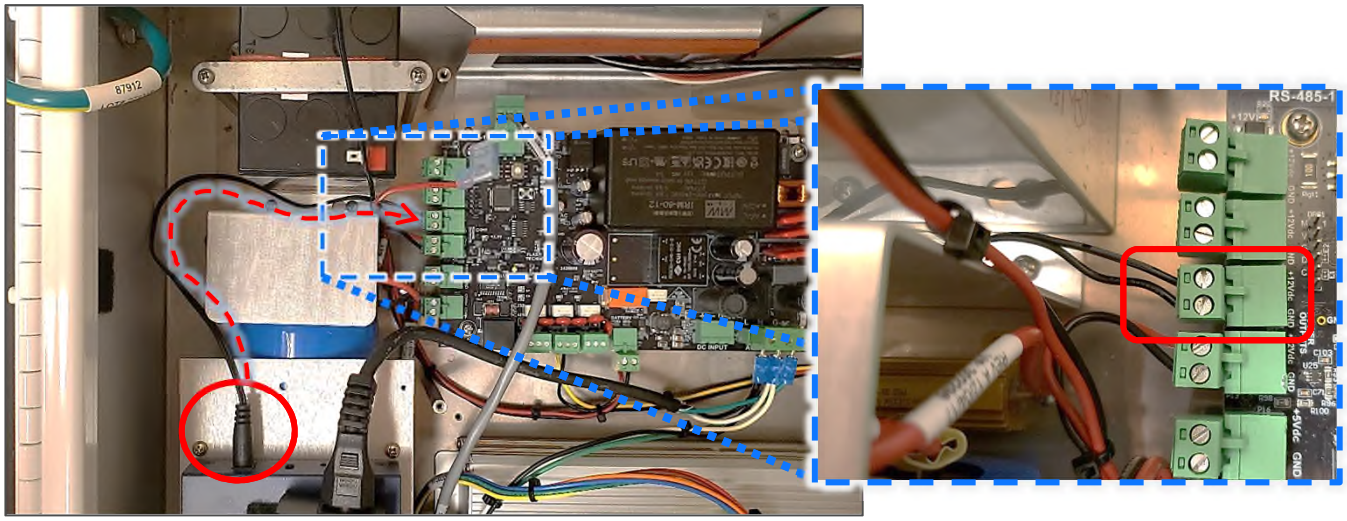
8.3 **REMOVE** A 12VDC POWER OUTPUT PLUG FROM PCB4



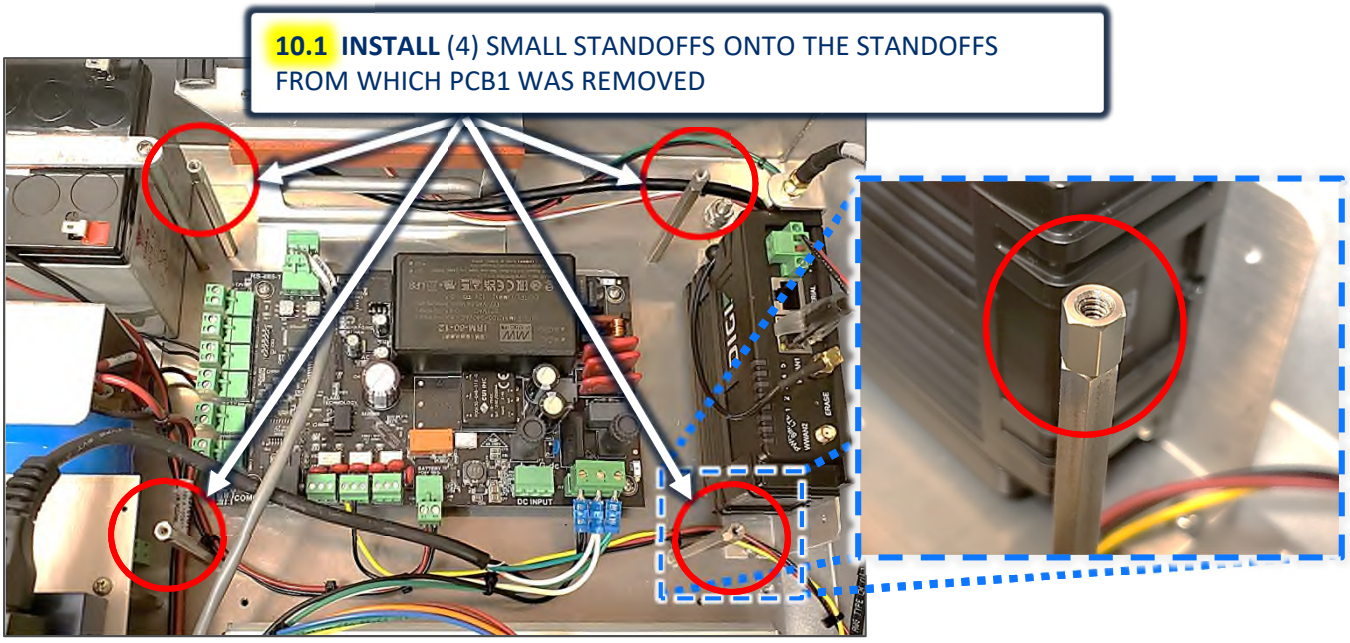
8.2 **CONNECT** BLACK/WHITE (+) ON LEFT & BLACK (-) ON RIGHT

STEP 9: CONNECT SWITCH POWER HARNESS TO PCB4

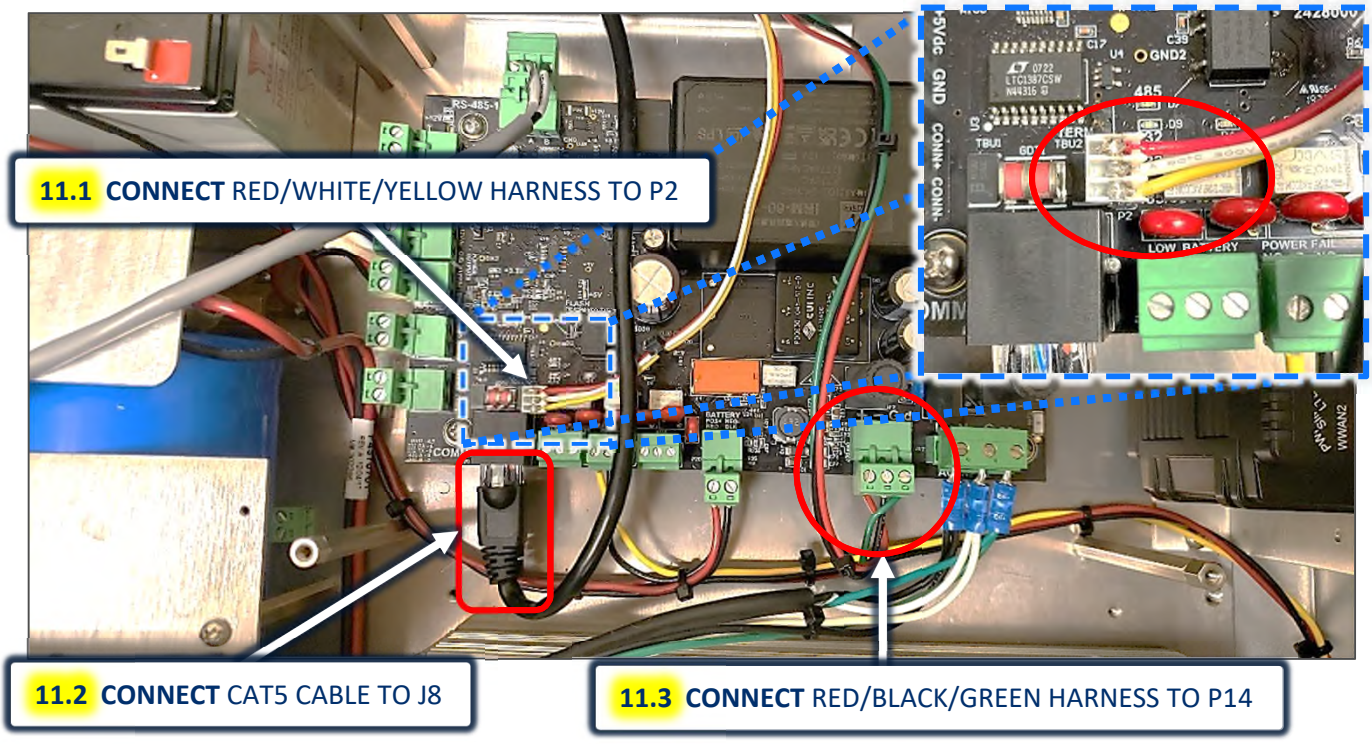
9.1 **ROUTE** SWITCH HARNESS BETWEEN BATTERY AND CAPACITOR COVER & CONNECT TO PCB4



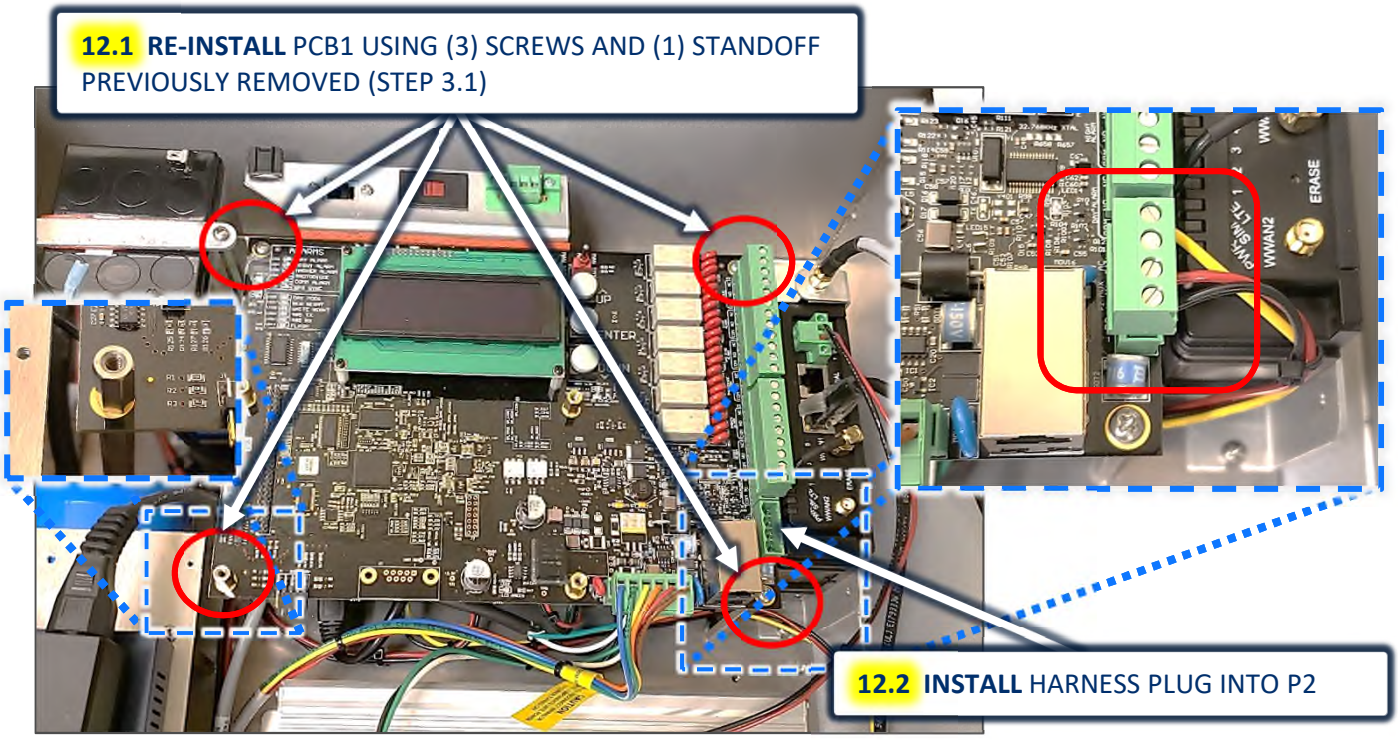
STEP 10: INSTALL ITEM #4 – F5903353, SMALL STANDOFFS



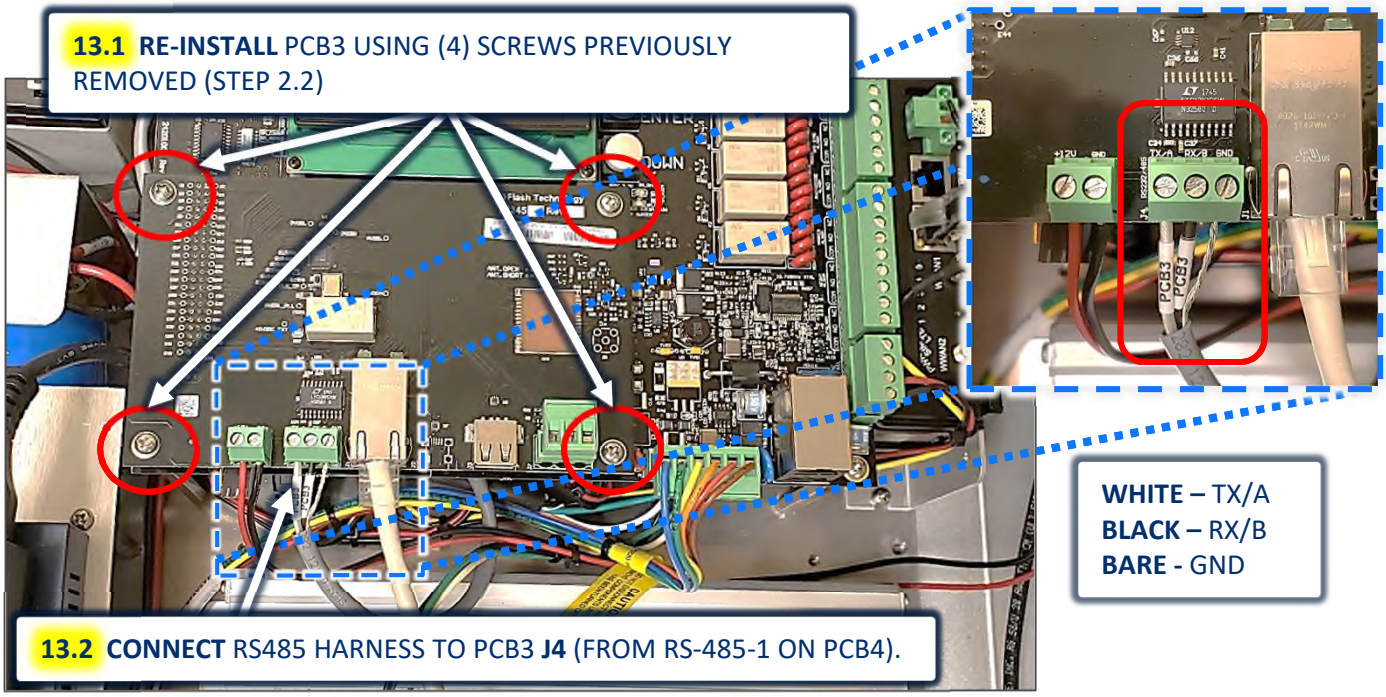
STEP 11: CONNECT WIRE HARNESSES FROM BRACKET TO PCB4



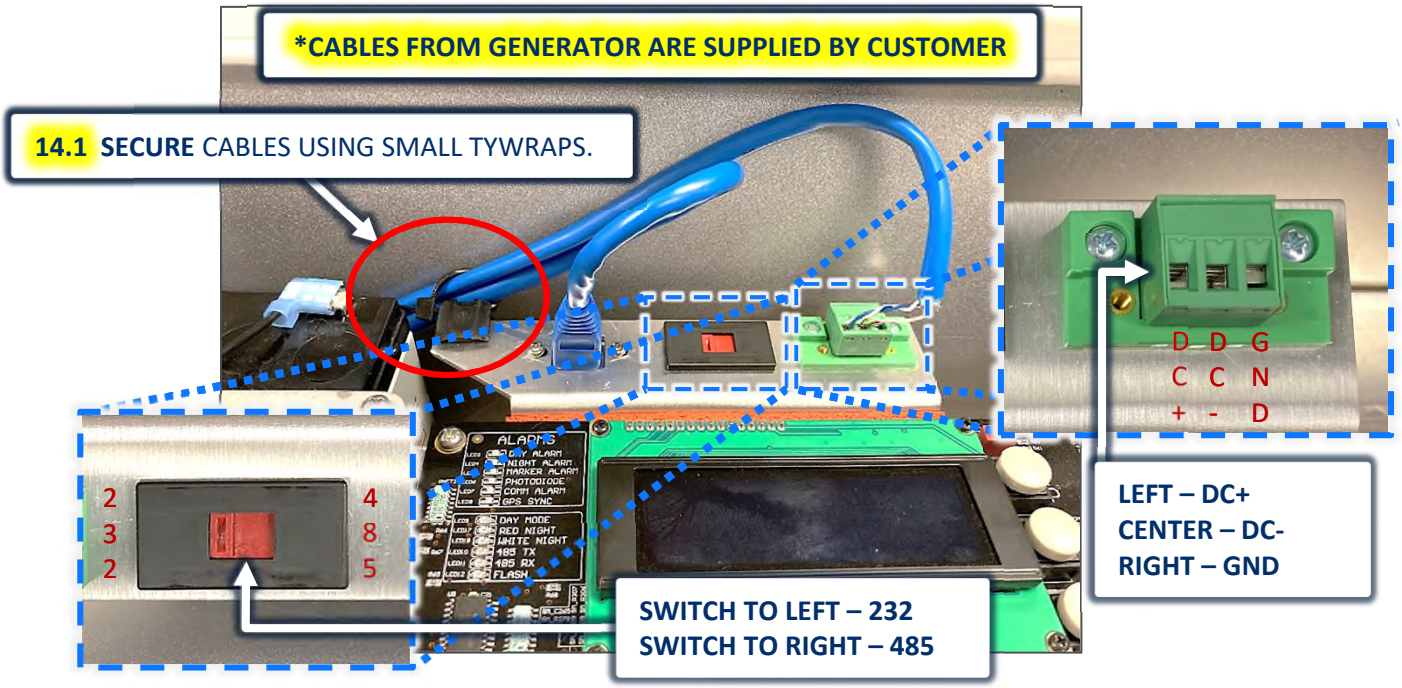
STEP 12: RE-INSTALL PCB1 & CONNECT HARNESS



STEP 13: RE-INSTALL PCB3 & CONNECT RS485 HARNESS

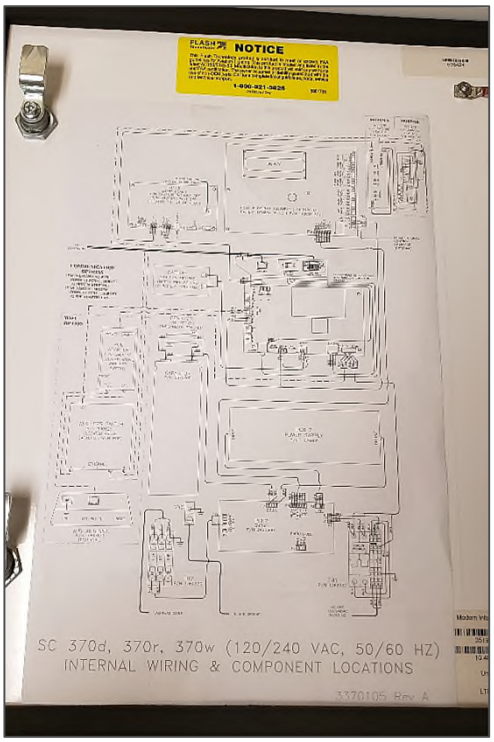


STEP 14: SECURE GENERATOR CABLES* USING ITEM #6 – F5901026, SMALL TYWRAPS

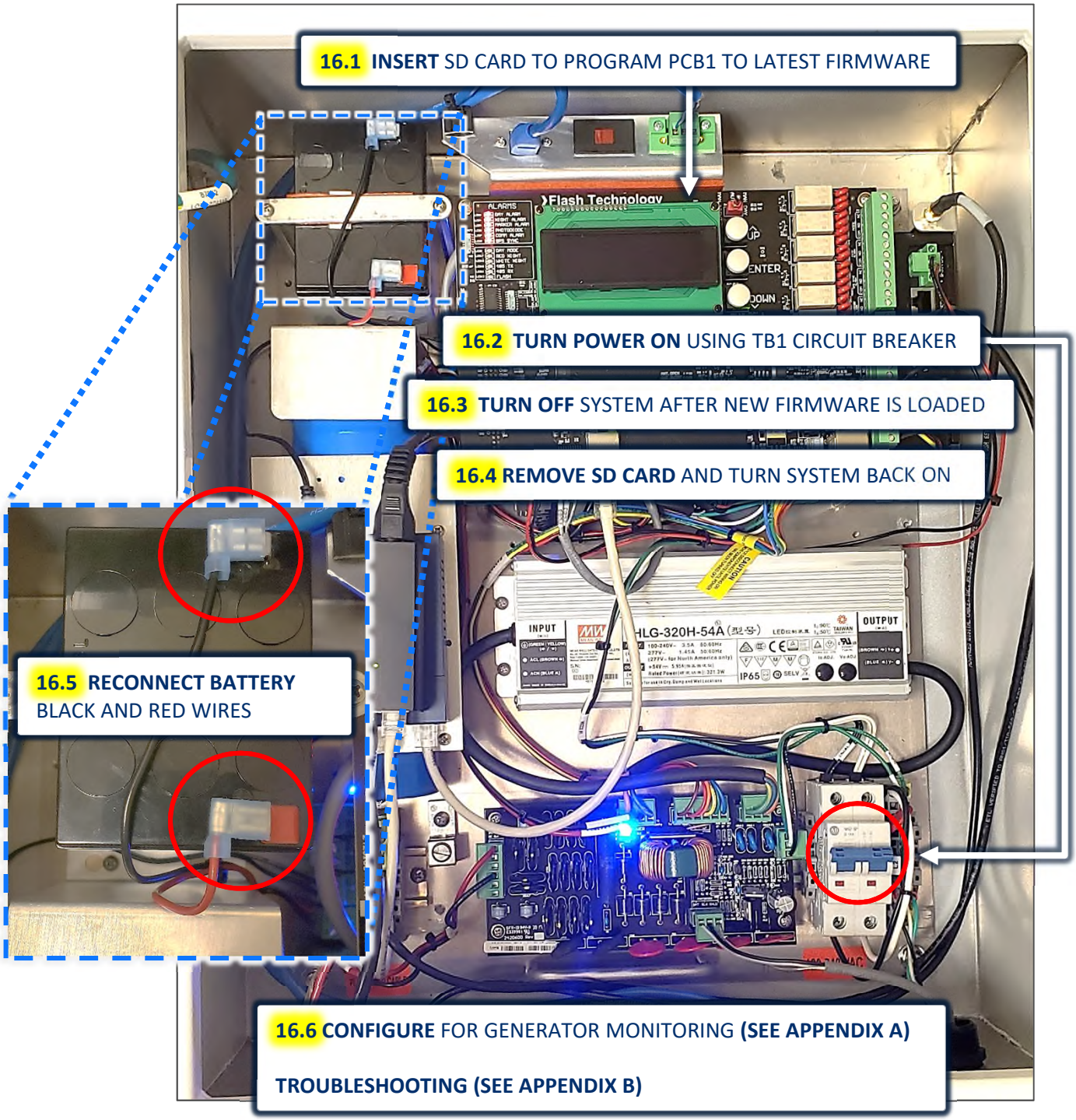


STEP 15: APPLY ITEM #5 – F3370105, INFO CARD SC 370X GEN MON

15.1 APPLY NEW INFO CARD OVER THE EXISTING ONE ON THE ENCLOSURE DOOR.

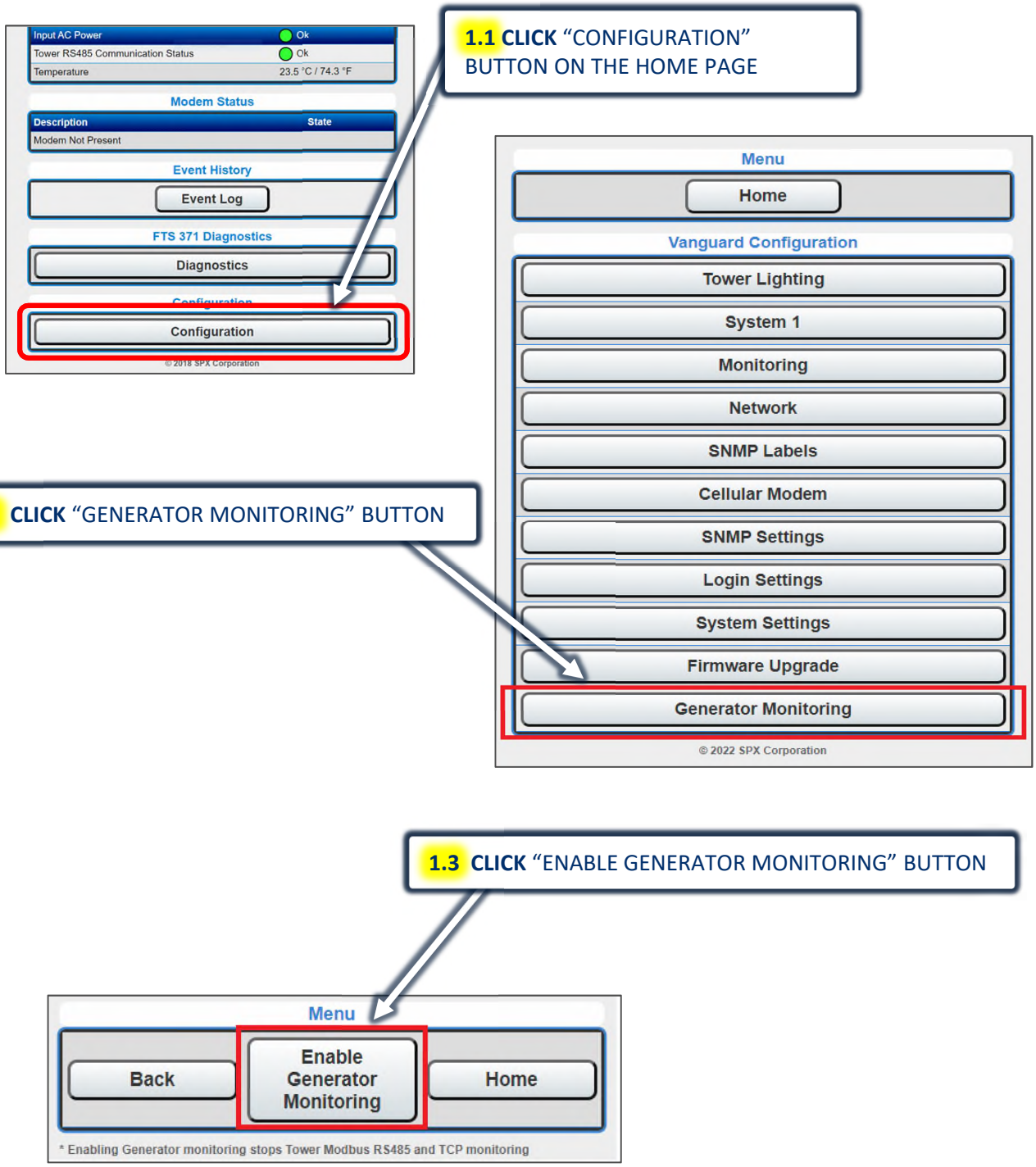


STEP 16: INSERT ITEM #7 – SD CARD & TURN POWER TO UNIT ON

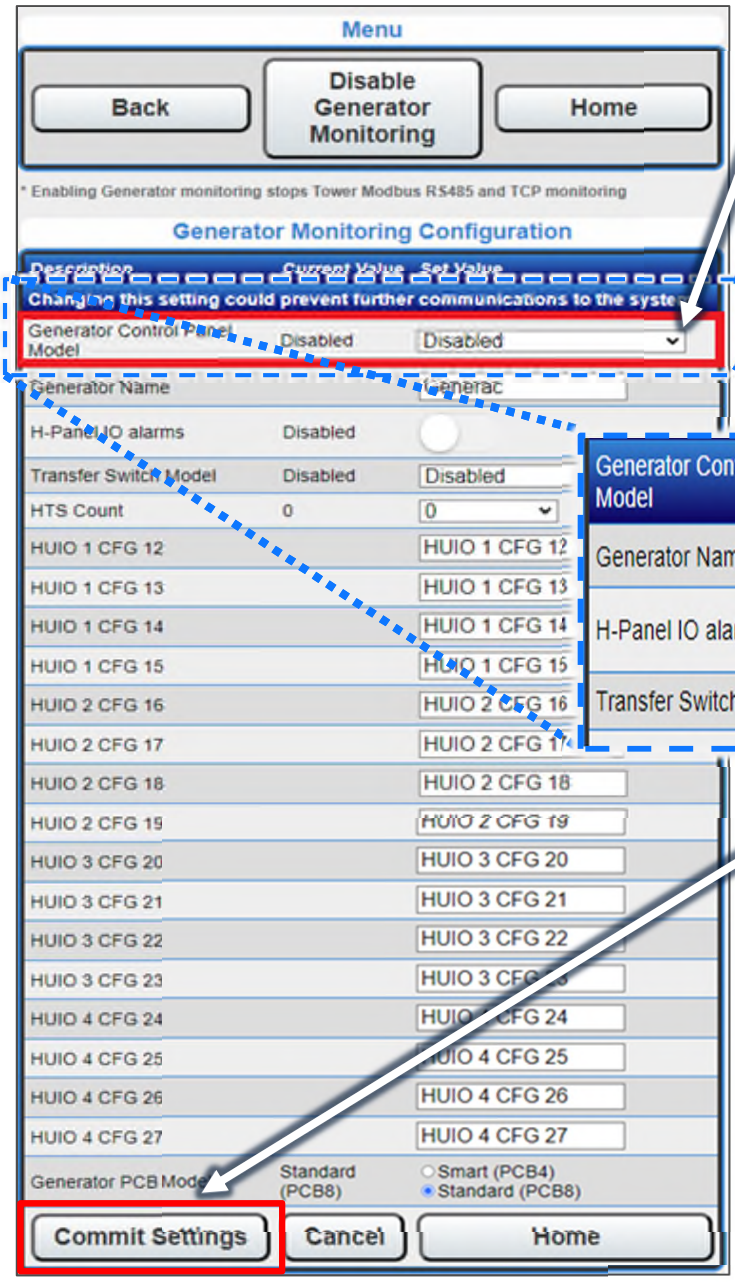


APPENDIX A

STEP 1: LOGIN TO WEBPAGE AND NAVIGATE TO THE CONFIGURATION PAGES

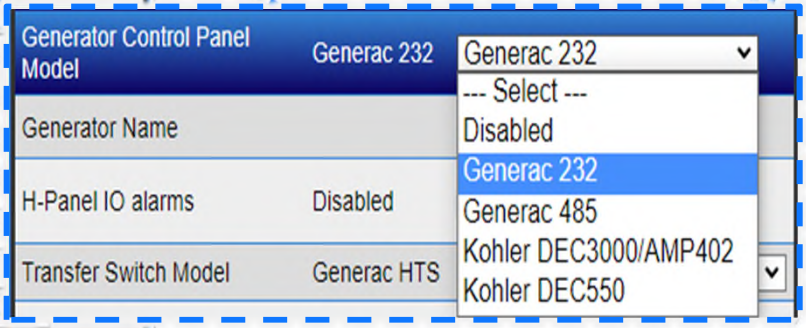


STEP 2: SELECT GENERATOR CONTROL PANEL MODEL



2.1 SELECT GENERATOR CONTROL PANEL MODEL

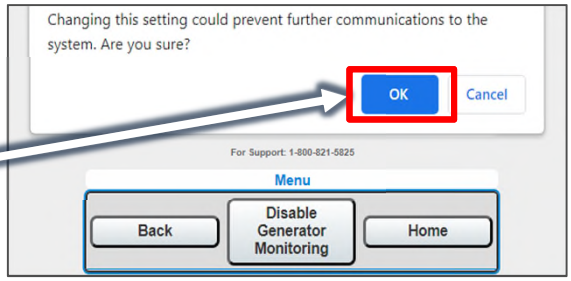
BY DEFAULT GENERATOR CONTROL PANEL MODEL AND TRANSFER SWITCH MODEL ARE DISABLED. SELECT ONLY THE CORRECT CONTROL PANEL MODEL AT FIRST. THIS WILL ENABLE OPTIONS FOR THAT PARTICULAR CONTROL PANEL.



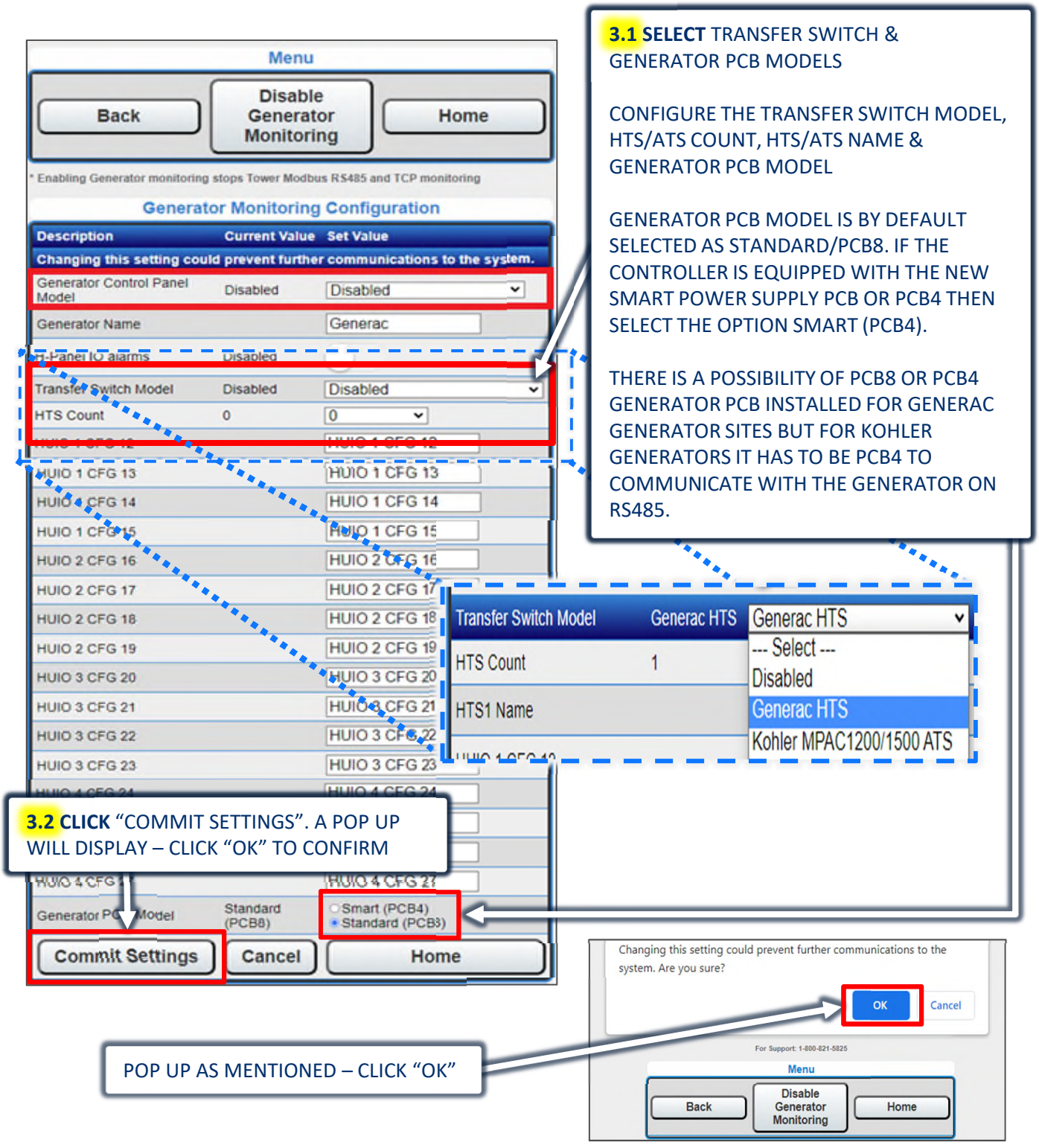
2.2 CLICK "COMMIT SETTINGS". A POP UP WILL DISPLAY – CLICK "OK" TO CONFIRM

AFTER CONFIRMING SELECTION, MAKE SURE THE GENERATOR CONTROL PANEL MODEL IS UPDATED ON THE WEBPAGE. IF THE CURRENT VALUE IS NOT UPDATED TO THE GENERATOR MODEL SELECTED THEN REFRESH THE WEBPAGE ONCE BEFORE RETRYING.

POP UP AS MENTIONED – CLICK "OK"



STEP 3: SELECT TRANSFER SWITCH & GENERATOR PCB MODELS



3.1 SELECT TRANSFER SWITCH & GENERATOR PCB MODELS

CONFIGURE THE TRANSFER SWITCH MODEL, HTS/ATS COUNT, HTS/ATS NAME & GENERATOR PCB MODEL

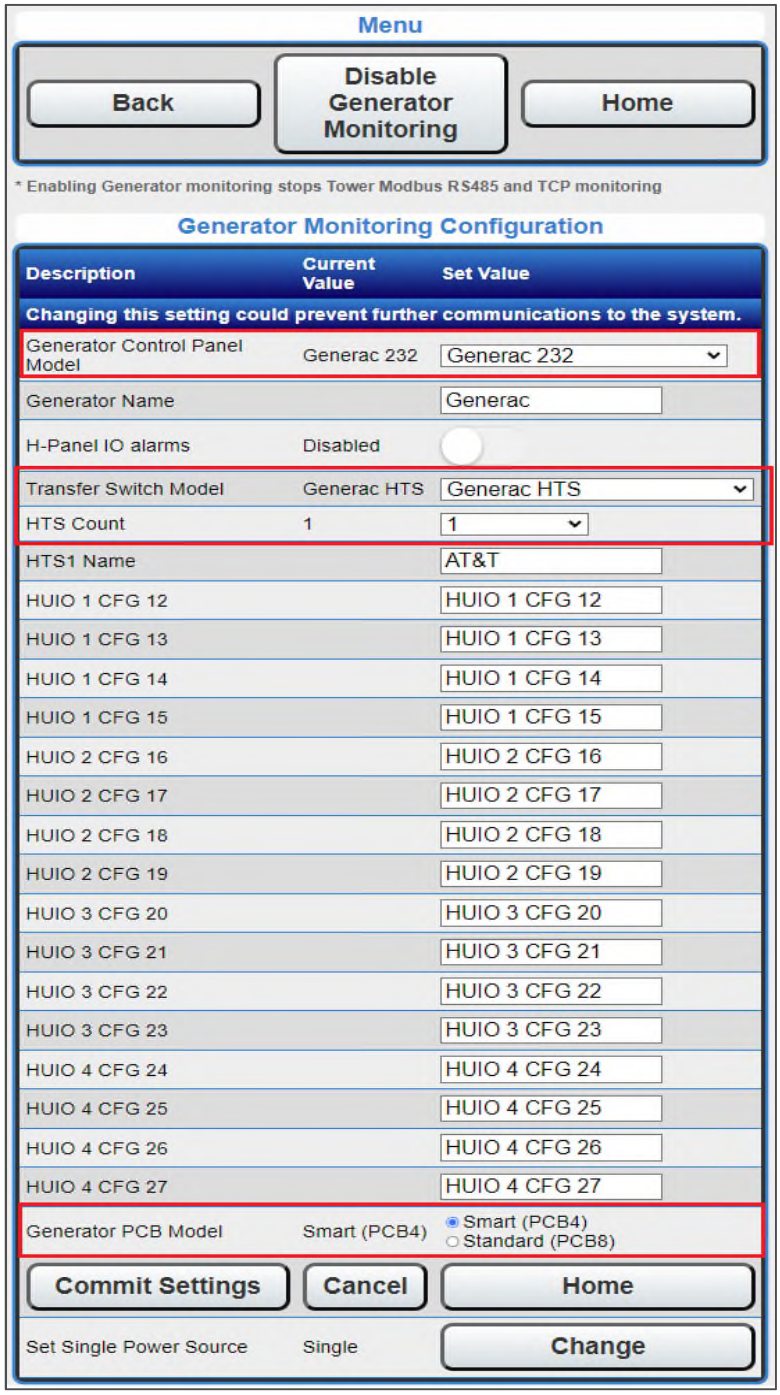
GENERATOR PCB MODEL IS BY DEFAULT SELECTED AS STANDARD/PCB8. IF THE CONTROLLER IS EQUIPPED WITH THE NEW SMART POWER SUPPLY PCB OR PCB4 THEN SELECT THE OPTION SMART (PCB4).

THERE IS A POSSIBILITY OF PCB8 OR PCB4 GENERATOR PCB INSTALLED FOR GENERAC GENERATOR SITES BUT FOR KOHLER GENERATORS IT HAS TO BE PCB4 TO COMMUNICATE WITH THE GENERATOR ON RS485.

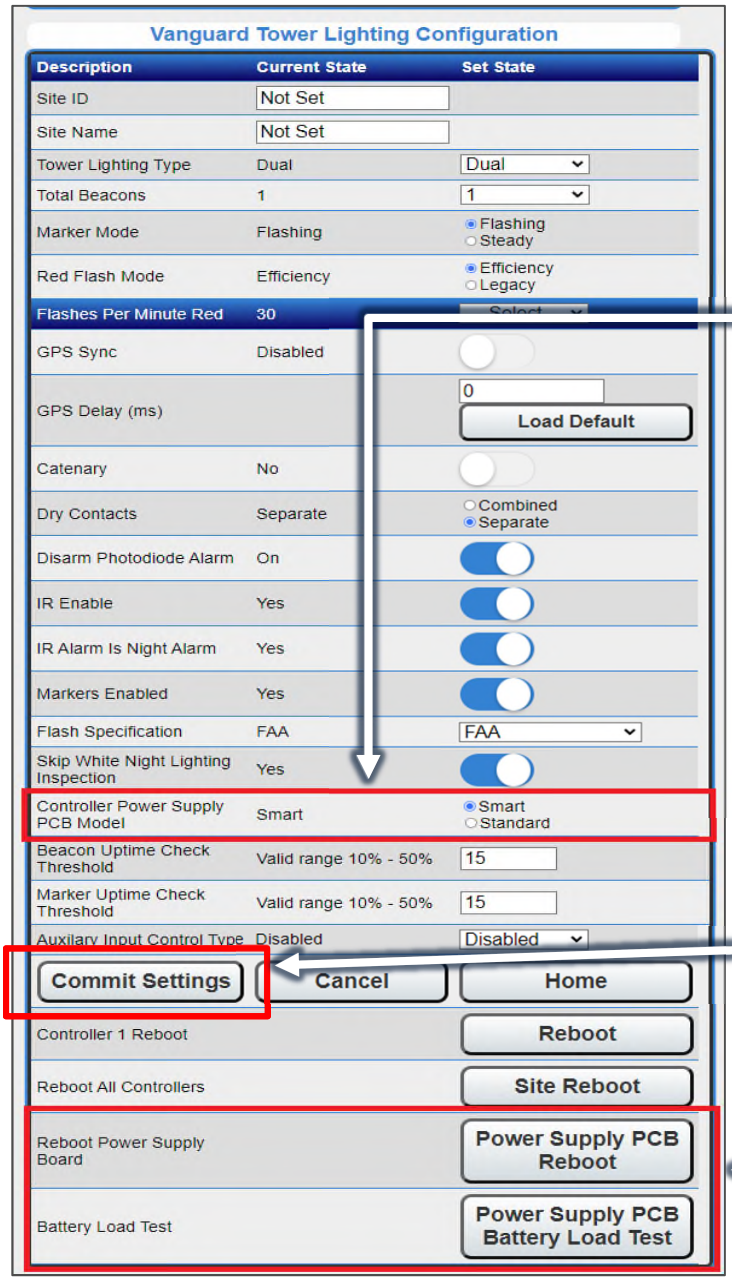
3.2 CLICK "COMMIT SETTINGS". A POP UP WILL DISPLAY – CLICK "OK" TO CONFIRM

POP UP AS MENTIONED – CLICK "OK"

A SAMPLE CONFIGURATION MENTIONED BELOW WITH THE CONFIGURATION OF GENERATOR CONTROL PANEL MODEL FIRST, THEN CONFIGURING TRANSFER SWITCH MODEL, HTS/ATS COUNT, GENERATOR CUSTOMIZED NAME, HTS/ATS CUSTOMIZED NAME AND GENERATOR PCB MODEL.



STEP 4: CONFIGURE POWER SUPPLY PCB MODELS



4.1 CONFIGURE POWER SUPPLY PCB MODEL

CONFIGURE POWER SUPPLY PCB MODEL FROM THE TOWER LIGHTING CONFIGURATION WEBPAGE

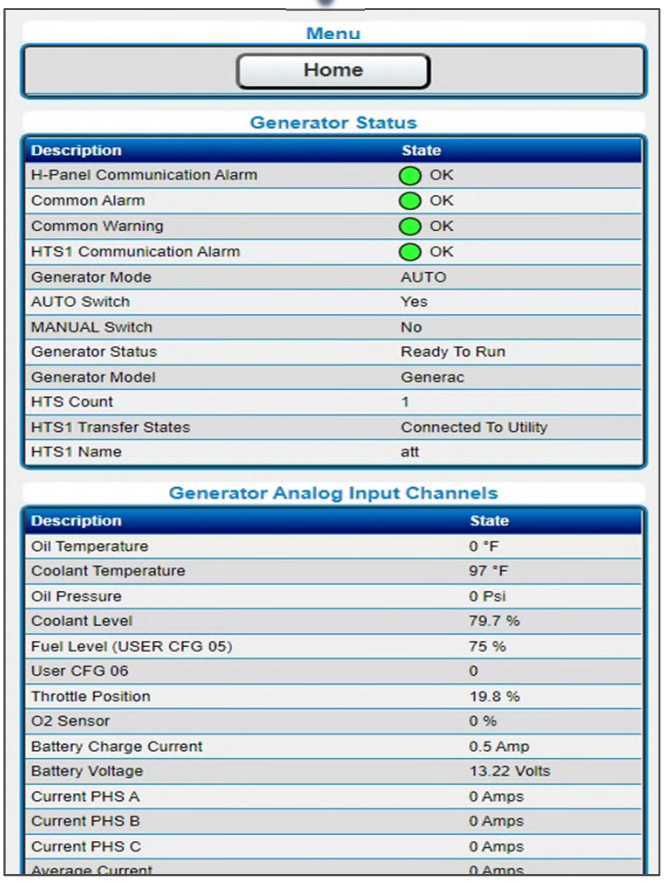
IF THE GENERATOR PCB MODEL IS CONFIGURED AS SMART, THEN POWER SUPPLY PCB MODEL ALSO SHOULD BE CONFIGURED AS SMART

THIS OPTION CAN ALSO BE SET FROM THE OLED DISPLAY, SITE TOWER CONFIGURATION MENU “PWR PCB MODEL”. THIS PAGE ALSO PROVIDE OPTIONS TO PERFORM REBOOT AND BATTERY LOAD TEST FOR THE SMART POWER SUPPLY PCB.

4.2 CLICK “COMMIT SETTINGS”

ONCE ALL THE CONFIGURATIONS ARE COMPLETED, NAVIGATE TO HOME PAGE AND CLICK ON GENERATOR BUTTON TO SEE THE GENERATOR DATA

TO VIEW THE SMART POWER SUPPLY PCB DATA SUCH AS POE VOLTAGE, BATTERY VOLTAGE AND ALARMS, CLICK DIAGNOSTICS BUTTON ON THE HOME PAGE AND NAVIGATE TO THE BOTTOM OF THE PAGE.



Menu

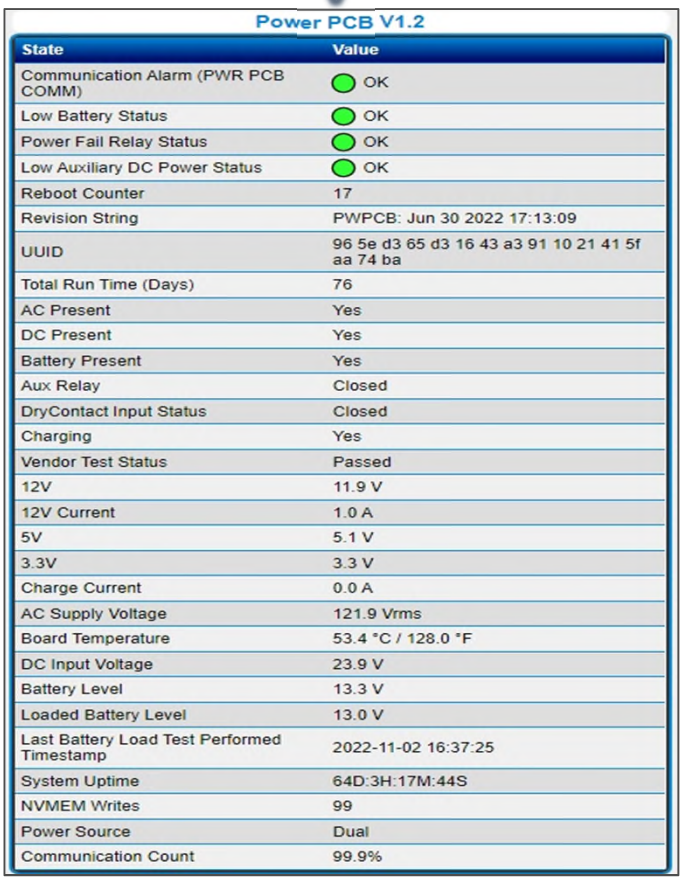
Home

Generator Status

Description	State
H-Panel Communication Alarm	OK
Common Alarm	OK
Common Warning	OK
HTS1 Communication Alarm	OK
Generator Mode	AUTO
AUTO Switch	Yes
MANUAL Switch	No
Generator Status	Ready To Run
Generator Model	Generac
HTS Count	1
HTS1 Transfer States	Connected To Utility
HTS1 Name	att

Generator Analog Input Channels

Description	State
Oil Temperature	0 °F
Coolant Temperature	97 °F
Oil Pressure	0 Psi
Coolant Level	79.7 %
Fuel Level (USER CFG 05)	75 %
User CFG 06	0
Throttle Position	19.8 %
O2 Sensor	0 %
Battery Charge Current	0.5 Amp
Battery Voltage	13.22 Volts
Current PHS A	0 Amps
Current PHS B	0 Amps
Current PHS C	0 Amps
Average Current	0 Amps



Power PCB V1.2

State	Value
Communication Alarm (PWR PCB COMM)	OK
Low Battery Status	OK
Power Fail Relay Status	OK
Low Auxiliary DC Power Status	OK
Reboot Counter	17
Revision String	PWPCB: Jun 30 2022 17:13:09
UUID	96 5e d3 65 d3 16 43 a3 91 10 21 41 5f aa 74 ba
Total Run Time (Days)	76
AC Present	Yes
DC Present	Yes
Battery Present	Yes
Aux Relay	Closed
DryContact Input Status	Closed
Charging	Yes
Vendor Test Status	Passed
12V	11.9 V
12V Current	1.0 A
5V	5.1 V
3.3V	3.3 V
Charge Current	0.0 A
AC Supply Voltage	121.9 Vrms
Board Temperature	53.4 °C / 128.0 °F
DC Input Voltage	23.9 V
Battery Level	13.3 V
Loaded Battery Level	13.0 V
Last Battery Load Test Performed Timestamp	2022-11-02 16:37:25
System Uptime	64D:3H:17M:44S
NVMEM Writes	99
Power Source	Dual
Communication Count	99.9%

APPENDIX B

1. **LOW BATTERY VOLTAGE (LOW BATTERY)**
   - **1.1** VERIFY THAT THERE IS A BATTERY CONNECTED
   - **1.2** VERIFY BATTERY LEVEL IS > 11.0 V BY MEASURING BATTERY VOLTAGE WITH A MULTIMETER AND VIA WEB PAGE GUI

2. **COMMUNICATION ALARM (PWR PCB COMM)**
   - **2.1** VERIFY **RX1, TX1** LEDS ARE FLASHING ON THE SMART PWR PCB
   - **2.2** VERIFY THE RS-485 CONNECTION BETWEEN **PCB3 SMART BOARD J4 (F2424500)** AND THE **PCB4 SMART PWR SUPPLY (F2428000) RS-485-1**
   - **2.3** VERIFY **SW1 & SW4** ARE SET TO **0** ON THE PCB4 SMART PWR SUPPLY

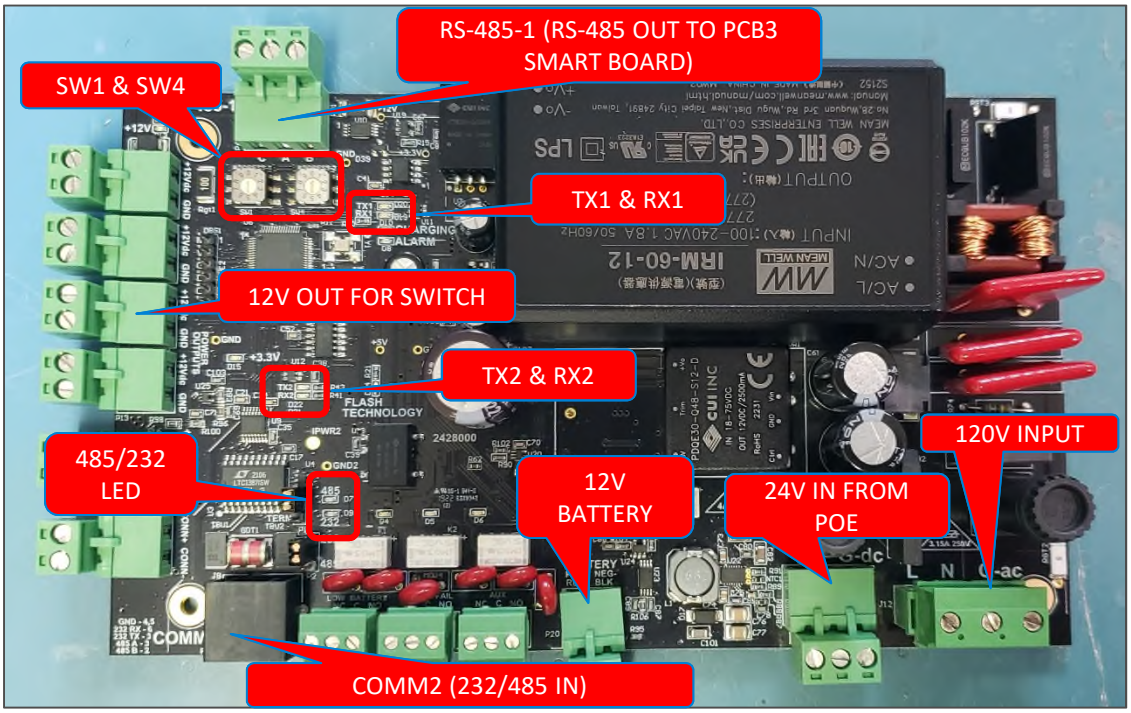
3. **GENERATOR NO COMM ALARM (KOHLER: CONTROLLER COMMUNICATIONALARM, OR GENERAC: H-PANEL COMMUNICATION ALARM)**
   - **3.1** VERIFY THAT THE FOLLOWING GENERATOR SETTINGS ARE CORRECT:
     - **3.1.1** GENERATOR CONTROL PANEL MODEL
     - **3.1.2** TRANSFER SWITCH MODEL
     - **3.1.3** GENERATOR PCB MODEL = SMART (PCB4)
     - **3.1.4** CONTROLLER POWER SUPPLY PCB MODEL = SMART
   - **3.2** VERIFY RS-232/RE485 SELECTOR SWITCH IS SET ACCORDINGLY (LEFT – 232, RIGHT – 485)
   - **3.3** VERIFY THAT THE RED 485 LED OR THE BLUE 232 LED IS LIT ON THE PCB4 SMART PWRY SUPPLY

   - **3.4** VERIFY **RX2 & TX2** LEDS ARE FLASHING ON THE PCB4 SMART PWR SUPPLY

   - **3.5** IF THE **TX2 LED** IS FLASHING, BUT **RX2** LED IS NOT FLASHING, THE ISSUE APPEARS TO BE DUE TO NO RE-232/RE-485 DATA INPUT AT **COMM2**

FOR FURTHER ASSISTANCE, PLEASE CONTACT FLASH TECHNOLOGY TECH SUPPORT AT:
FLASH.SUPPORT@SPX.COM +1 (800) 821-5825,

PCB4 SMART PWR SUPPLY (F2428000)



PCB3 SMART BOARD J4 (F2424500)