

QUICK INSTALLATION GUIDE

S-NODE COMBO GAS TRANSMITTER



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WARNING:

This document must be carefully read by all individuals who have or will have the responsibility of using or maintaining this product. The product will perform as designed only if it is used and maintained in accordance with the manufacturer's instructions .

In order to avoid any injury or damage to the the human body or the product, The user must pay close attention to the fields marked by the warning sign. 







*** PLEASE READ THE ENTIRE DOCUMENT BEFORE ATTEMPTING START-UP!**

Start-up checklist:

 **DO NOT SUPPLY POWER TO CP-MGMS-S200 PANEL DURING INSTALLATION VERIFICATION !**

1. Verify that the CP-MGMS-S200 controller is mounted at eye level and has adequate unobstructed clearance around the unit (at least 5 to 6 ft from the ground).
2. Verify that the working ambient temperature of the space is within the operating parameters of the controller 23°F to 104°F (-5°C to 40°C).
3. At the electrical panel, provide a dedicated 120 volt and 10 Amp power circuit for the controller. Do not turn on the power breaker at this time!

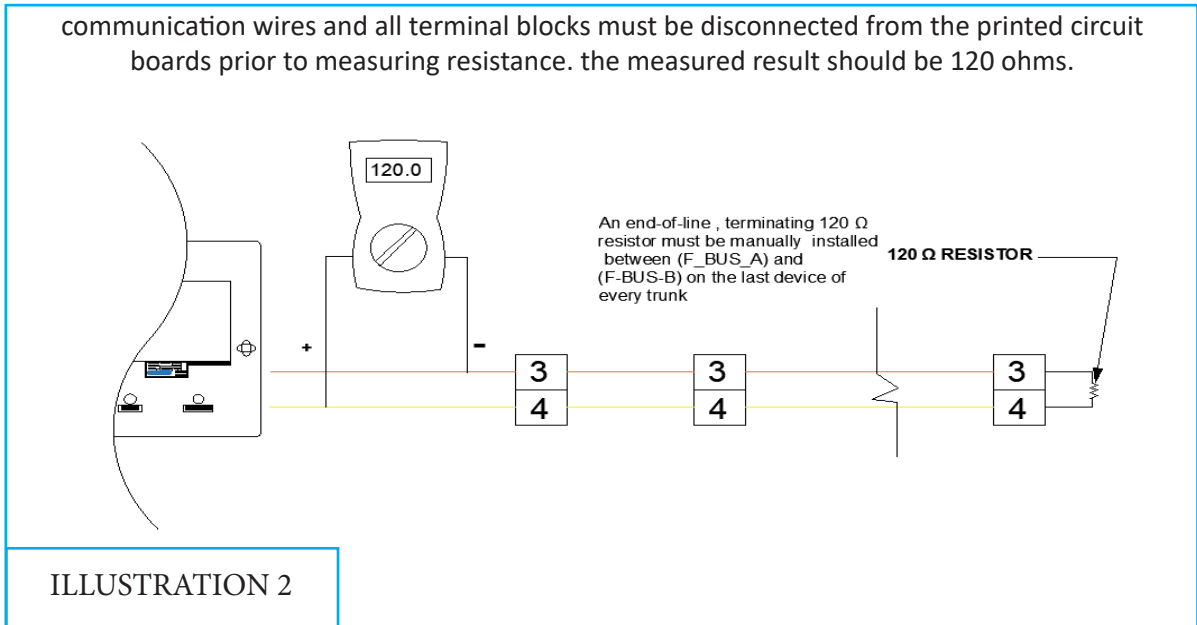
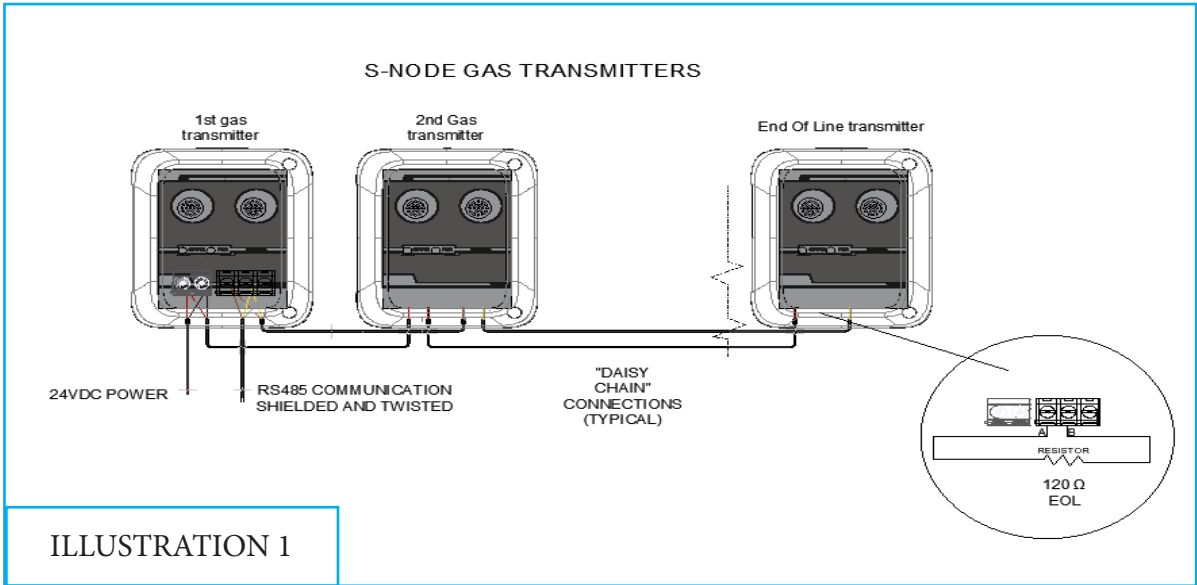
CP-MGMS-S200 VOLTAGE READING:

4. Verify that communication cable is (20 to 24 AWG, 2-conductor, yellow & orange twisted and shielded pair for RS 485 communication) .
5. Verify that DC power cable is (16 to 18 AWG, 2-conductor , one twisted pair , Red and Black twisted pair for DC power).
-  **6. Important:** the cable polarity must be maintained from CP-MGMS-S200 controller to each Analog transmitter.
-  **7. Important:** the cable wiring must be daisy chained : controller to gas transmitter, then gas transmitter to gas transmitter, each gas transmitter should have 4 wires entering and 4 wires leaving. (ILLUSTRATION1)
-  **8. Important:** the cable shields must be continuous and not grounded at any point along the communication run. the shields should be taped so there is no possibility of shorting to ground in the sensor housings, the communication cable shields should be taped back at the controller. Do not cut them off since it may be necessary to ground them to each ground if communication problems are experienced.
-  **9. Important:** when installing the gas transmitters verify that the address number labeled on the outside of the housing matches approved layout plans. Typical SNODEs are specifically programmed for each project. Sensor addresses must be in sequential order per provided riser diagram to simplify communication troubleshooting and ensure proper zone control.
-  **10. Important:** confirm that a 120 Ω resistor was manually installed across the RS 845 communication terminals "F_BUS_A" and "F_BUS_B" for the last device on each trunk segment .(illustration2)
11. Make sure that the physical length for each trunk in the system does not exceed 3900 ft .
-  **12. Important:** All transmitter terminal blocks, with communication and power, must be unplugged from the printed circuit boards during this procedure. At the CP-MGMS-S200 Controller measure the resistance (ohms) between the trunk cable RS-485 communication wires A and B for each trunk in the system. Resistance should be around 120 ohms .
13. check all cables and verify no short to ground.

14. Reconnect the terminal blocks to their circuit boards.

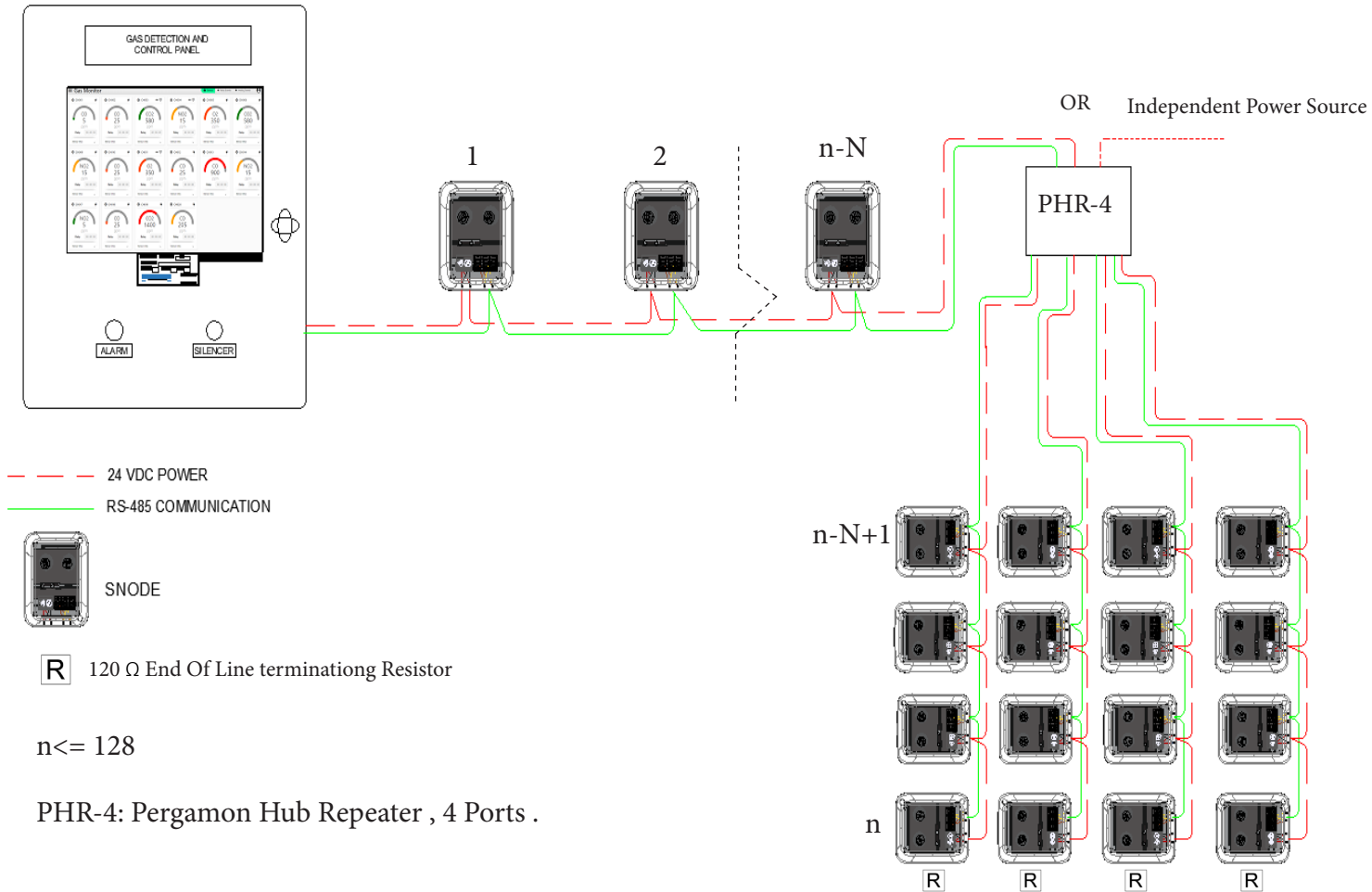
15. After finishing the installation , replace the bubble wrap on the transmitter covers ,and remove them only when all construction and painting are completed.

⚠ 16. important: DO NOT add any components to the control panel , it is strictly forbidden to add any kind of electrical components to the CP-MGMS panel.



CP-MGMS-MULTI GAS MONITORING SYSTEM

* Up to 128 Snode daisy chained digital sensors



Cabling & Wiring Guidelines:

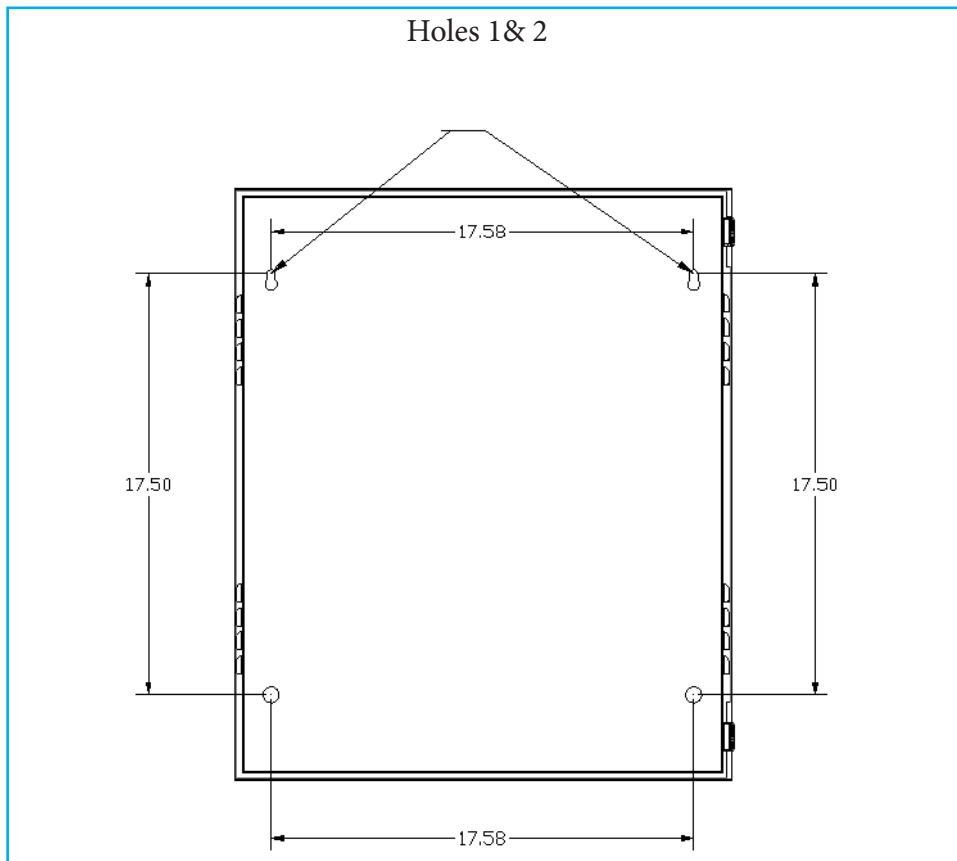
- **RS-485 Com Link:** 20 TO 24 AWG one shielded and twisted pair , two different colors.
- **24 VDC Power:** Trunk/Bus: 16 TO 18 AWG one twisted pair , two different colors.
- Daisy-Chained Wiring Configuration,
- Wire-splitting of the communication lines possible only with optional remote PHR-4 modules.
- See specific datasheets for detailed wiring diagrams.
- Max. total (3) repeaters PHR-4 allowed on the network.

Panel installation :



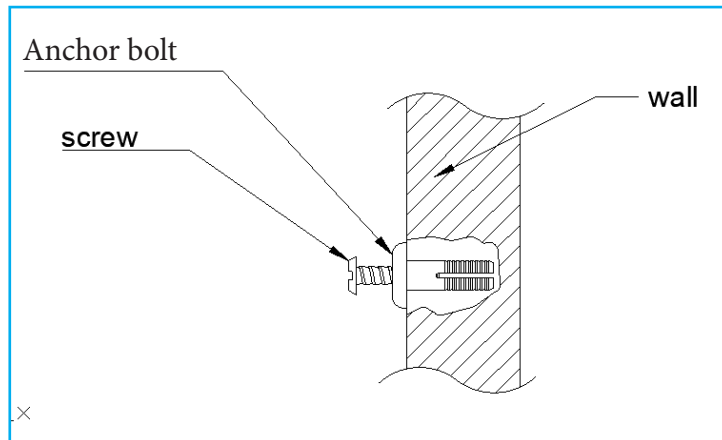
step1:

Using an electric Drill , make 4 mounting holes in the wall where the panel is to be placed according to the template below:



step 2:

After Drilling the 4 mounting holes install 1 anchor bolt in each hole , then insert round head or hexagonal head screws “screw size 1/4”, “ head size(7/16)” ; one into each anchor . Do not push the screws all the way in , make sure half of it is still sticking OUT. (see picture bellow) :

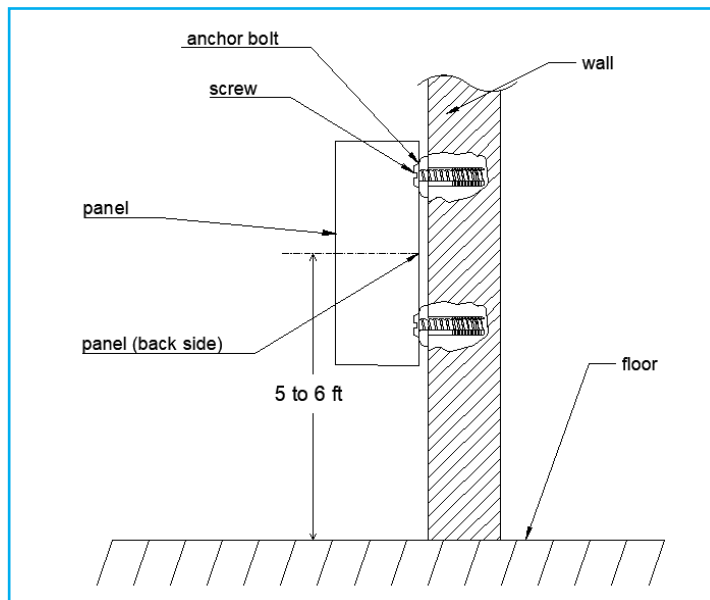


step 3:

Pick up the panel and place holes 1 & 2 in the half screw that is sticking out of the wall, make sure the two top screws pass through the narrow sides of the two top wholes .

step 4:

Open the door of the panel so you will be able to see the heads of the mounting screws sticking out of the back of the panel , Using a screw driver or an electric drill screw the 4 screws all the way in to secure the panel on the wall.



step 5: important:

Make sure the main power supply is OFF (disconnected) . in the panel: pull up the 2 fuse holders , F1 and F2 .

step 6:

Connect the wires according to the technical drawing provided with the panel .

step 7:

Connect the 120 v power source . then push back the fuse holders F1 and F2.

step 8:

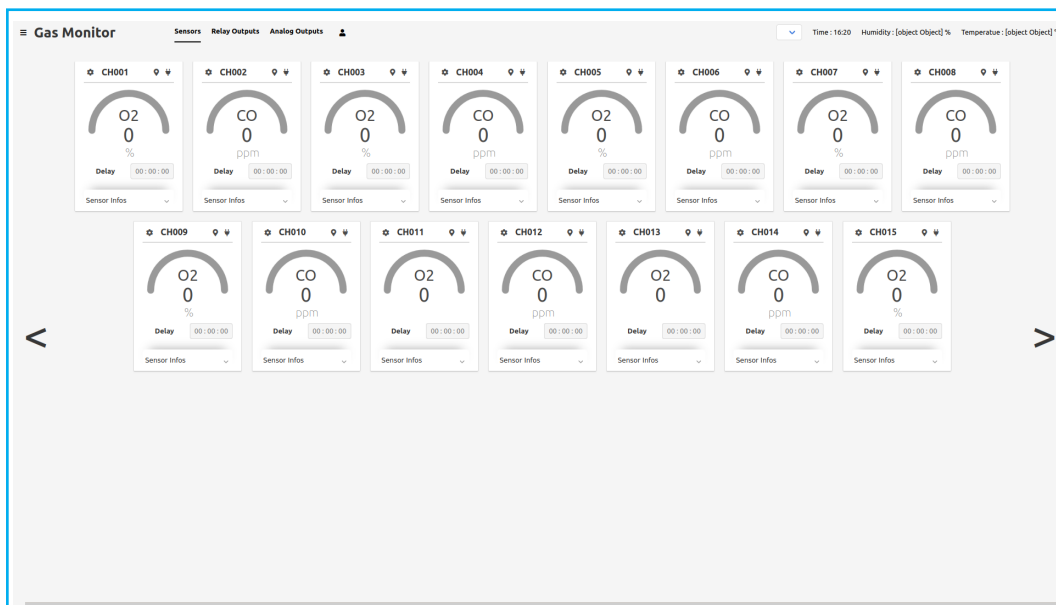
Turn the main power source back ON.

step 9:

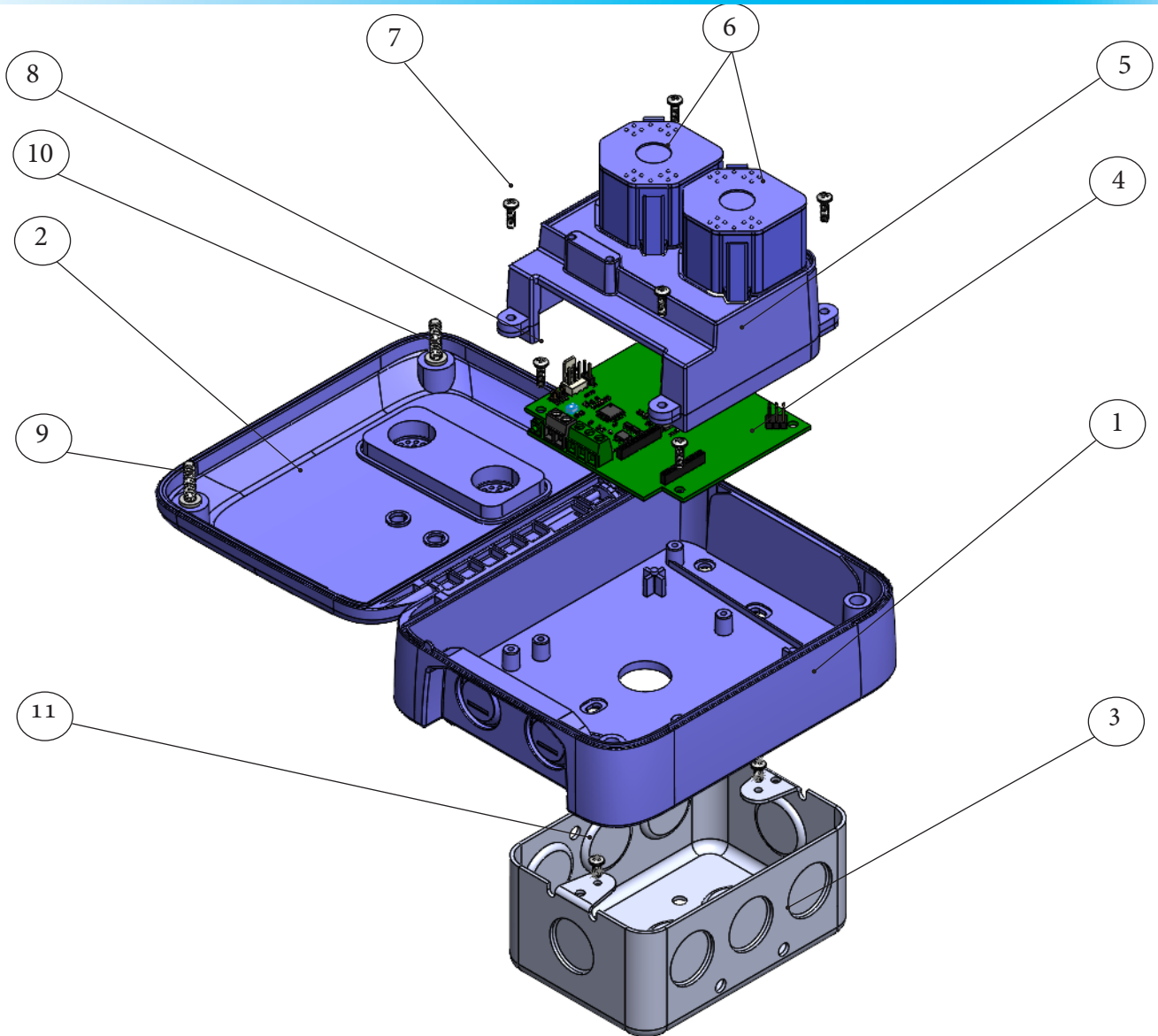
Close the door of the panel and wait for a few minutes till the system stabilizes .

step 10:

Check the screen and make sure every thing is connected and working properly , you should be able to see something similar to the picture below:



Gas transmitter installation :

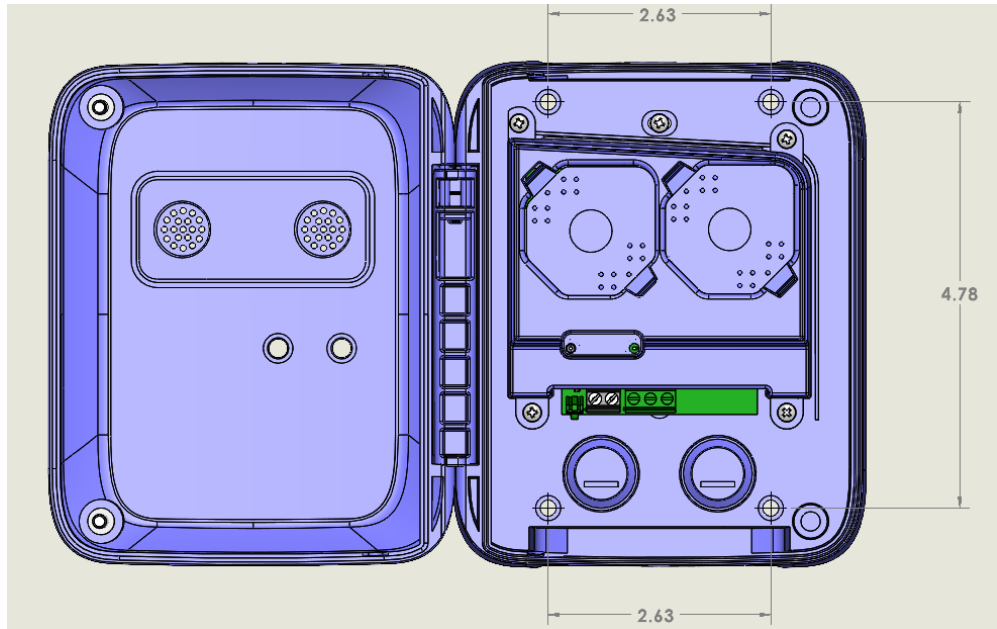


ITEM Num	DESCRIPTION	QUANTITY
1	SENSOR BASE	1
2	DOOR	1
3	JUNCTION BOX	1
4	PCB	1
5	PCB PROTECTION COVER	1
6	SENSOR CARTRIDGES	2
7	PAN HEAD SCREW #4-24	4
8	PAN HEAD SCREW #4-24	3
9	PAN HEAD SCREW # 8-32	2
10	NYLON SELF-RETAINING WASHER	2
11	JUNCTION BOX SCREWS	2

WALL MOUNT :

Step 1 :

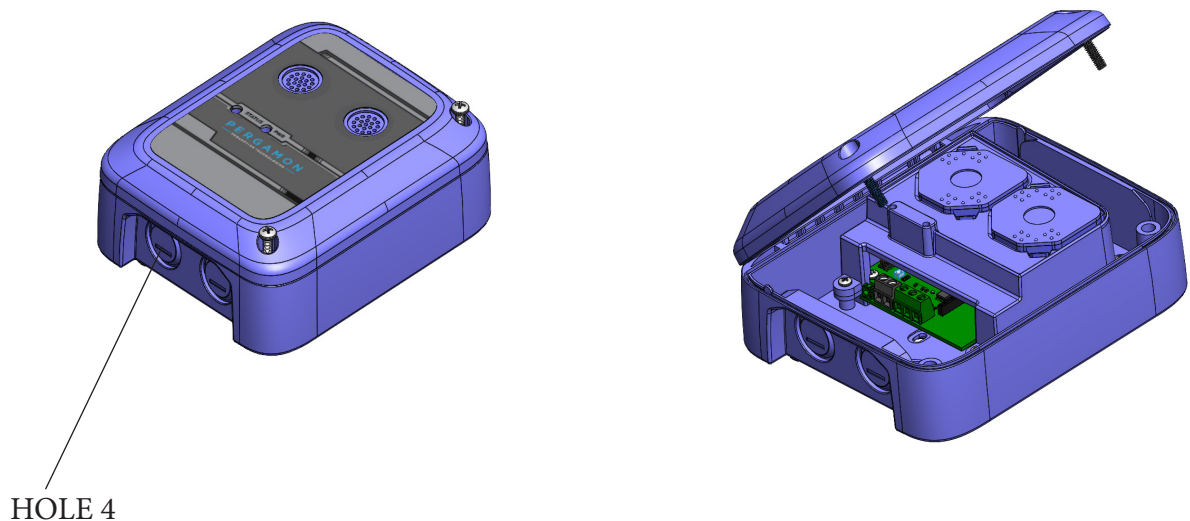
Using a drill (size 3/16 in) make 4 installation holes on the wall , refer to the picture below for measurements:



* all measurements are in inch

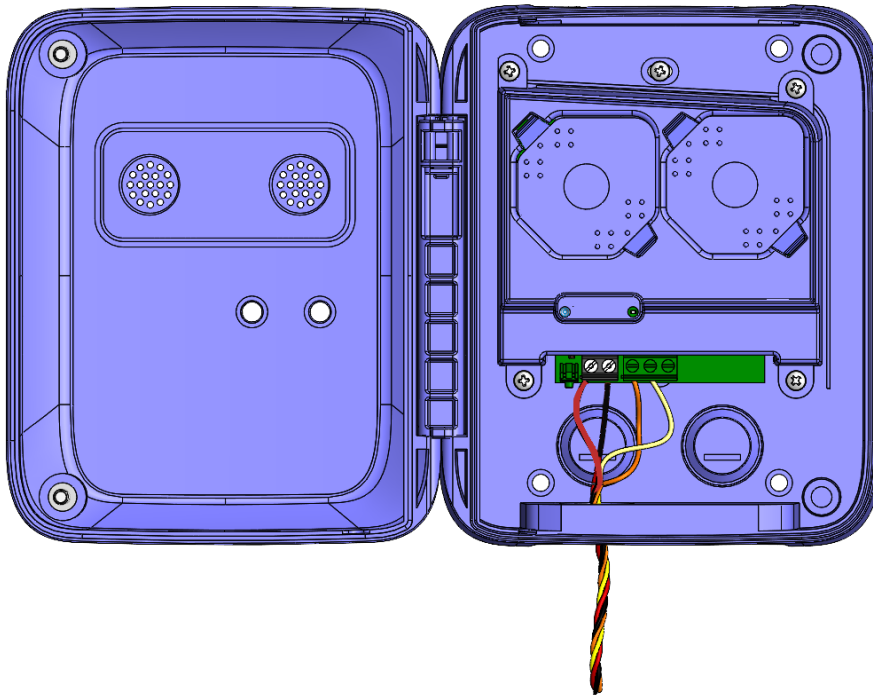
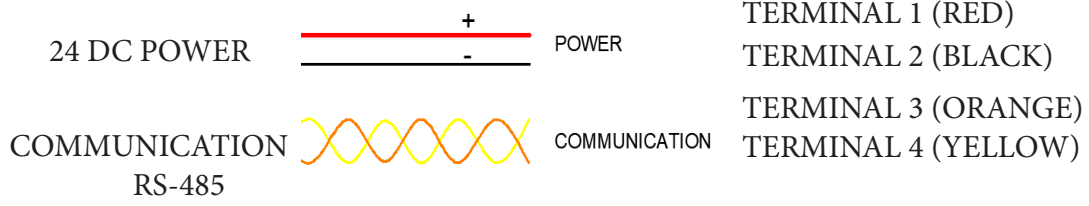
Step 2 :

Using a screwdriver or an electric drill Unscrew the two 8-32 screws (9) until they detach from the screwdriver (or the electric drill) head. You will then be able to open the Door (2) of the SNODE box.



STEP 3 :

Pull the wires through HOLE 4 and place them into their designated terminals .



STEP 4 :

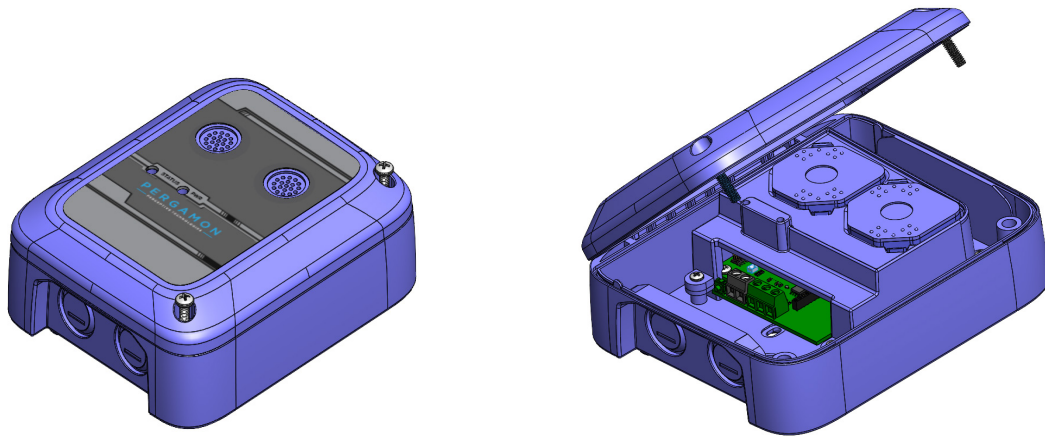
Close and secure the door using the two #8-32 screws (item 9)



JUNCTION BOX MOUNT :

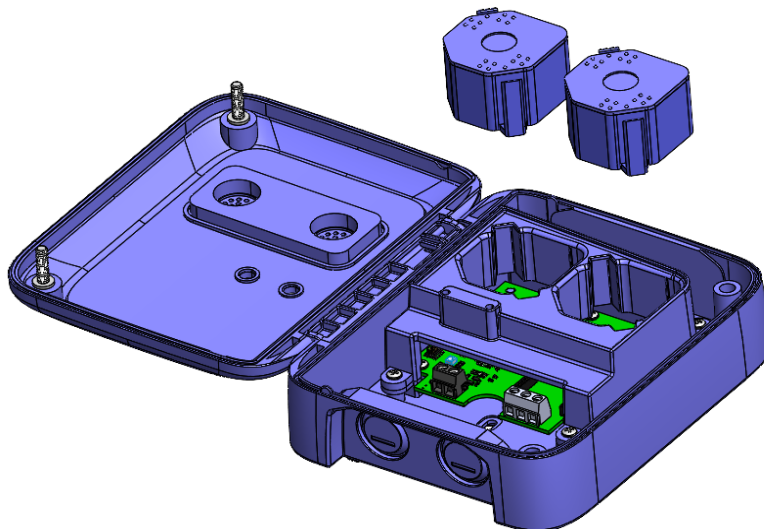
STEP 1:

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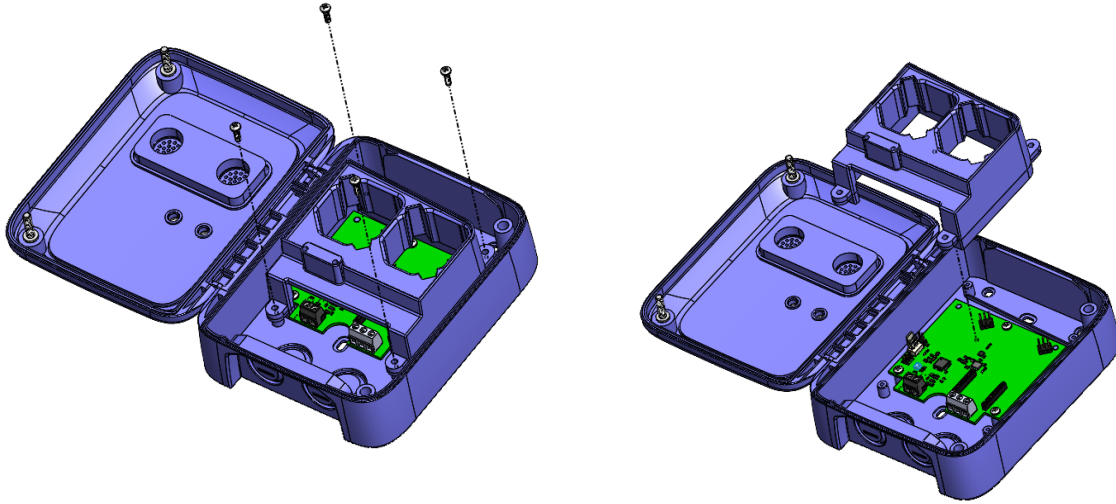
STEP 2:

Remove the sensor cartridges from their base by squeezing the tabs on each side and gently lifting them out.



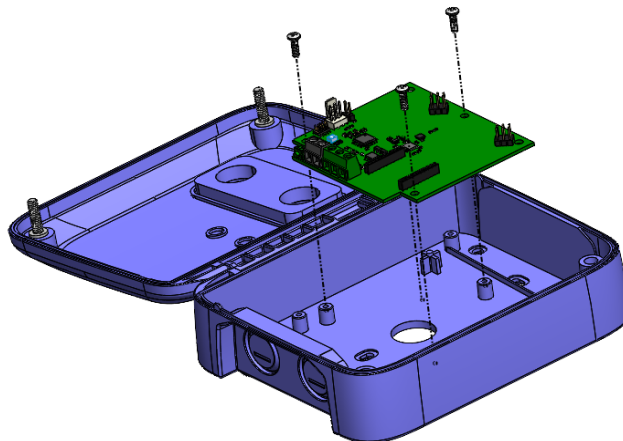
STEP 3 :

Unscrew #4-24 screws (7) then remove the PCB PROTECTION COVER (3)



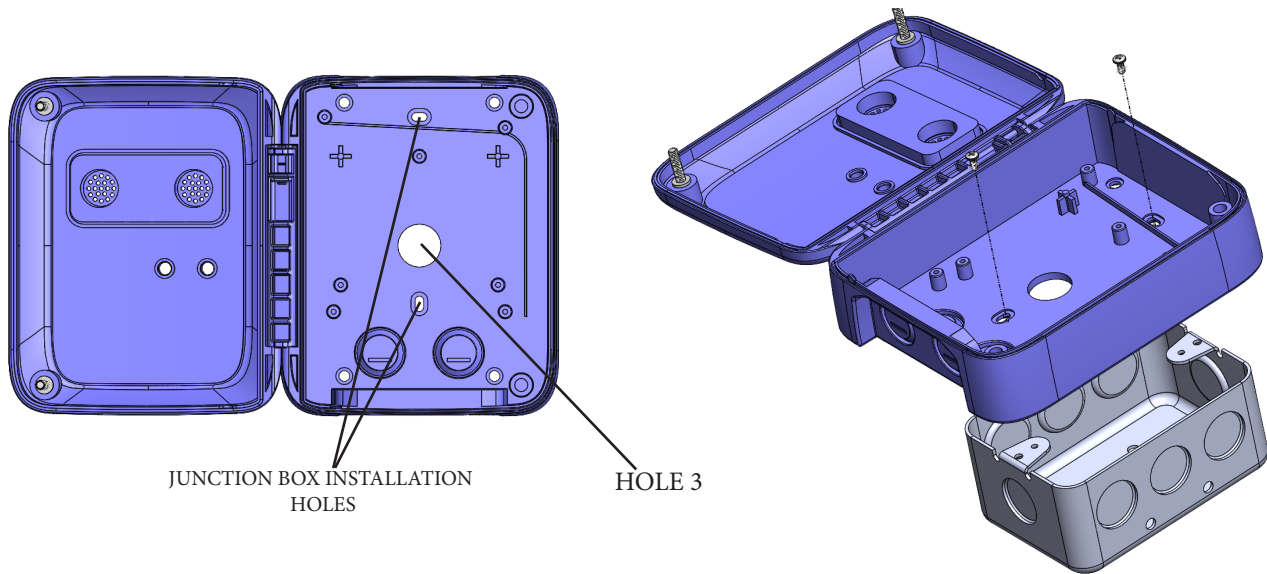
STEP 4 :

Unscrew the #4-24 screws (8) then remove the PRINTED CIRCUIT BOARD (PCB)



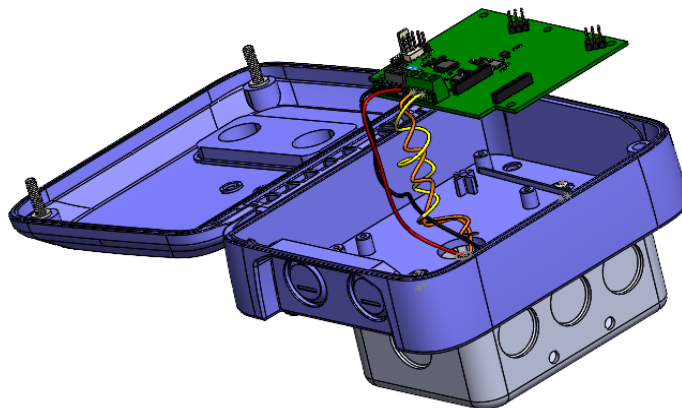
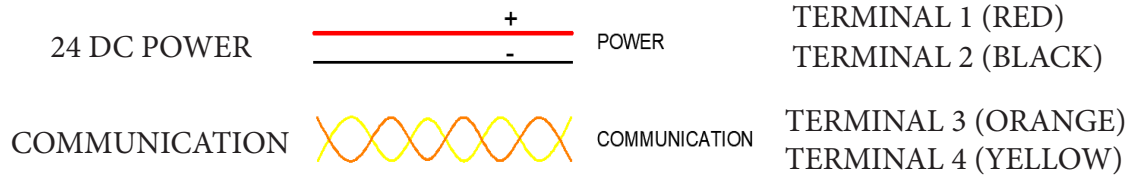
STEP 5 :

Using screws (11) secure the base of the SNODE box to the junction box using holes 1 and 2



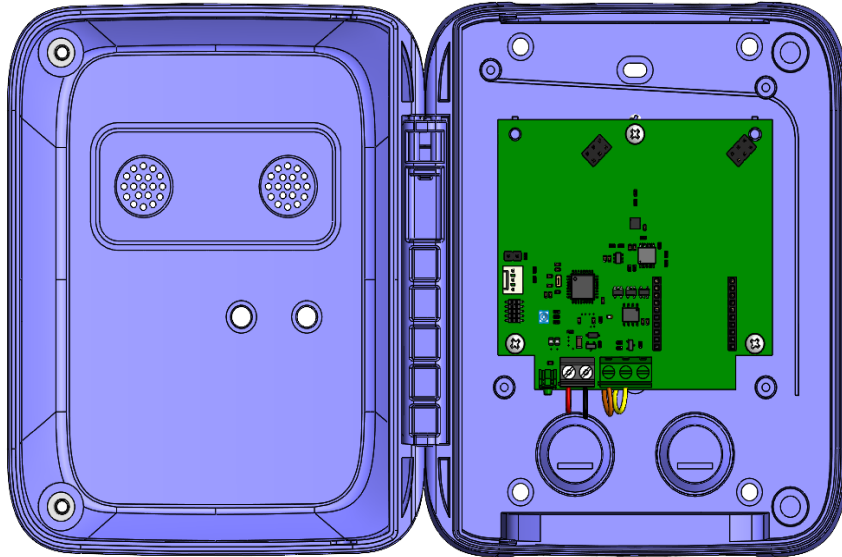
STEP 6 :

Pull the wires from the junction box through HOLE 3 and place them into their designated terminals .



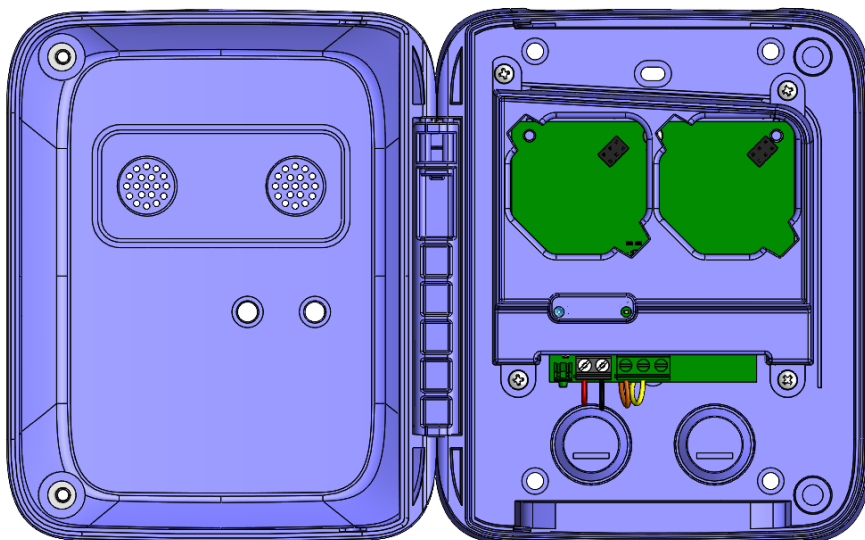
STEP 7 :

Place back the PCB and secure it Using screws #4-24 (item 8) .



STEP 8 :

Place the PCB protection cover and secure it using screws #4-24 (item7)

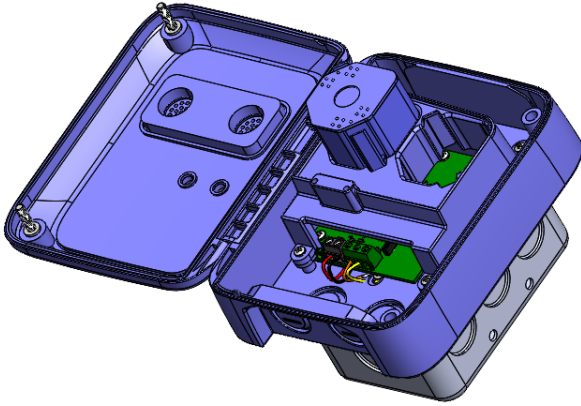


STEP 9 :

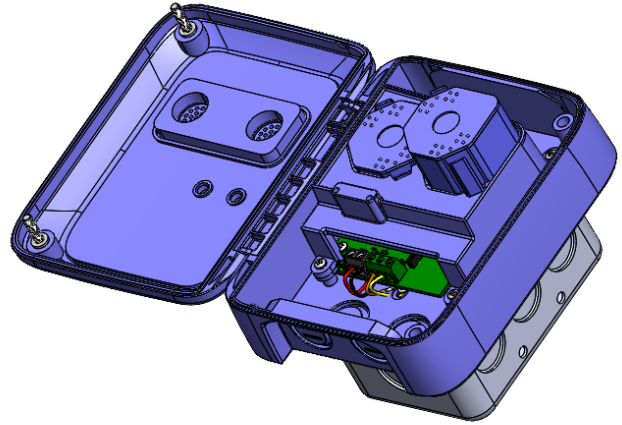
Place the sensor cartridges in the following order :

1- CO sensor on the left side .

2- NO2 sensor on the right side.



1



2

Step 10 :

Close and secure the DOOR .

