

Troubleshooting Guide for Rajant KM3-ES-2450 Enclosure System



KM3-ES-2450 Enclosure for Harsh Environments
TESSCO Sku 226396

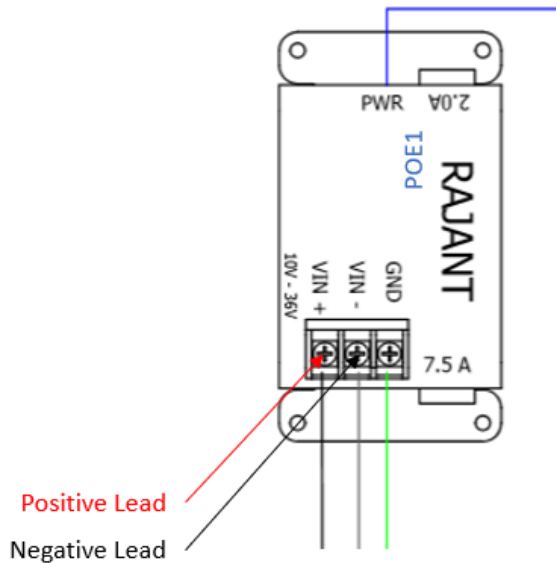
This guide provides troubleshooting for the KM3-ES-2450 NEMA4x enclosure system, SKU #226396. The guide assumes that the enclosure system has been installed in accordance with the local jurisdiction's regulations for hazardous environments. Please note that some steps have the potential to create electrical sparks or arcing if not performed properly. Only personnel certified and/or trained in the local jurisdiction's regulations for hazardous environments should perform the operations outline in this guide.

Equipment Required for Troubleshooting

- Digital multimeter with probes
- CAT6 Ethernet cable
- Laptop
- Rajant BC Commander software

Troubleshooting Process

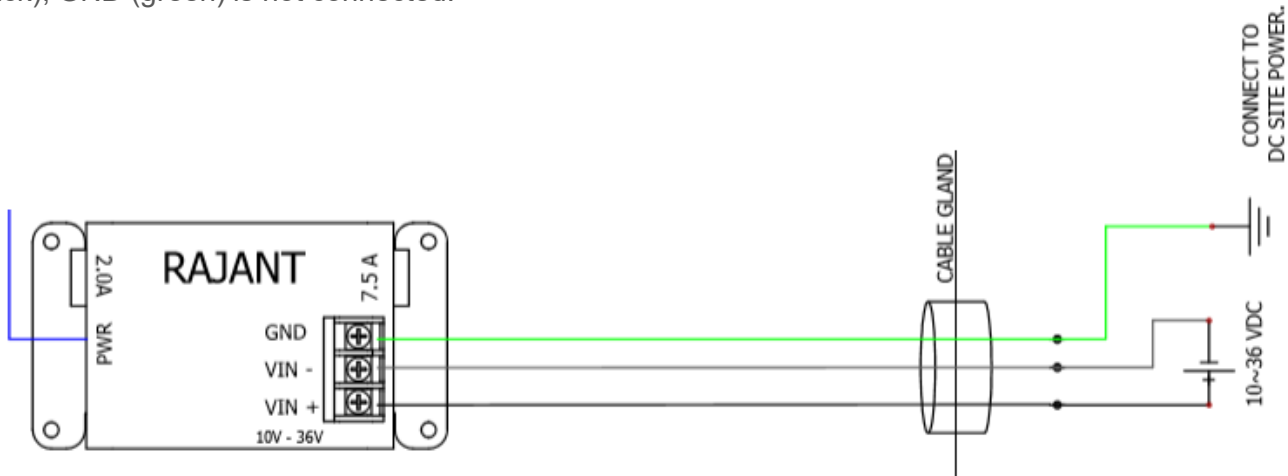
1. Place the multimeter leads to the DC input on the PoE injector, POE1 (positive to vin+ and negative to vin-).



2. Verify that the voltage is between 10 ~ 36 vdc. If the voltage is outside this range, then check the source voltage and adjust so that it is in the input voltage range of the PoE injector.

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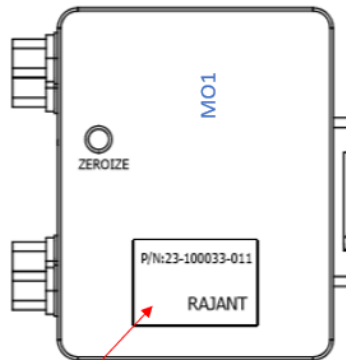
3. Verify that the DC power cable from enclosure is properly connected to the source: DC V- (white); DC V+ (black); GND (green) is not connected.



4. Verify that the 2.4 GHz antennas are connected to the ports on the top of the enclosure (MO1: Port B and MO1: Port D) per the door diagram.
5. Verify that the 5.0 GHz antennas are connected to the ports on the bottom of the enclosure (MO1: Port A and MO1: Port C) per the door diagram.
6. Verify the LED operation of MO1. A green LED means the radios are connected. A blue LED means the radios are not connected. If the LED is nonoperational, then the PoE injector is not operational.
7. Connect a computer to the Rajant radio with an ethernet cable.
8. Open the control panel on the computer. Select NETWORK AND INTERNET -> CHANGE ADAPTER OPTIONS.
9. Select the adapter being used from the file menu. Select PROPERTIES.
10. In the PROPERTIES menu, scroll down to the INTERNET PROTOCOL VERSION 4 (TCP/IPV4) item, select it, then select properties. NOTE: This window allows manual configuration of the network adapter's IP addresses.
11. Select "USE THE FOLLOWING IP ADDRESS".
12. Enter 10.26.50.2 under "IP ADDRESS". Do not use a 1 in the last octet.
13. Enter 255.0.0.0 under "SUBNET MASK". Press the "OK" button and then close the window.
14. Open the "RAJANT BC COMMANDER" application on the laptop. You should see all the breadcrumb radios on the network in the "BREADCRUMB TABLE" tab.

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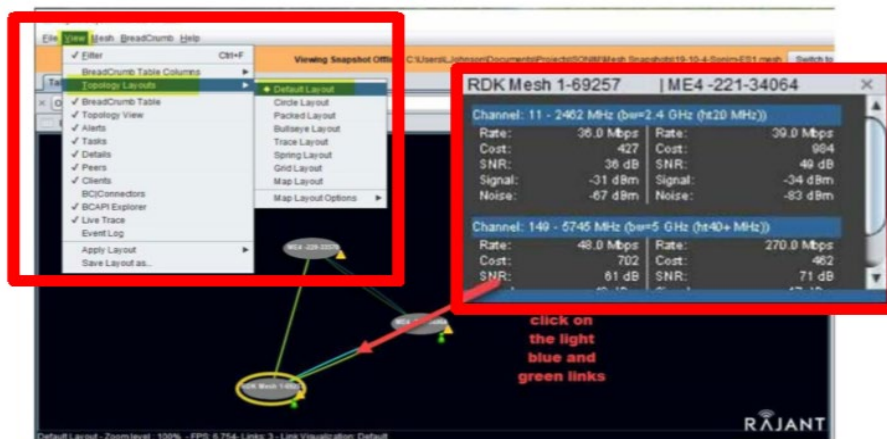
1. Identify the radio you are troubleshooting at the node via the radio's serial number located on the label by the ZEROIZE button. If you don't see the breadcrumb radio with that serial number on the network in the "BREADCRUMB TABLE" tab, then the radio is not operational.



Serial Number

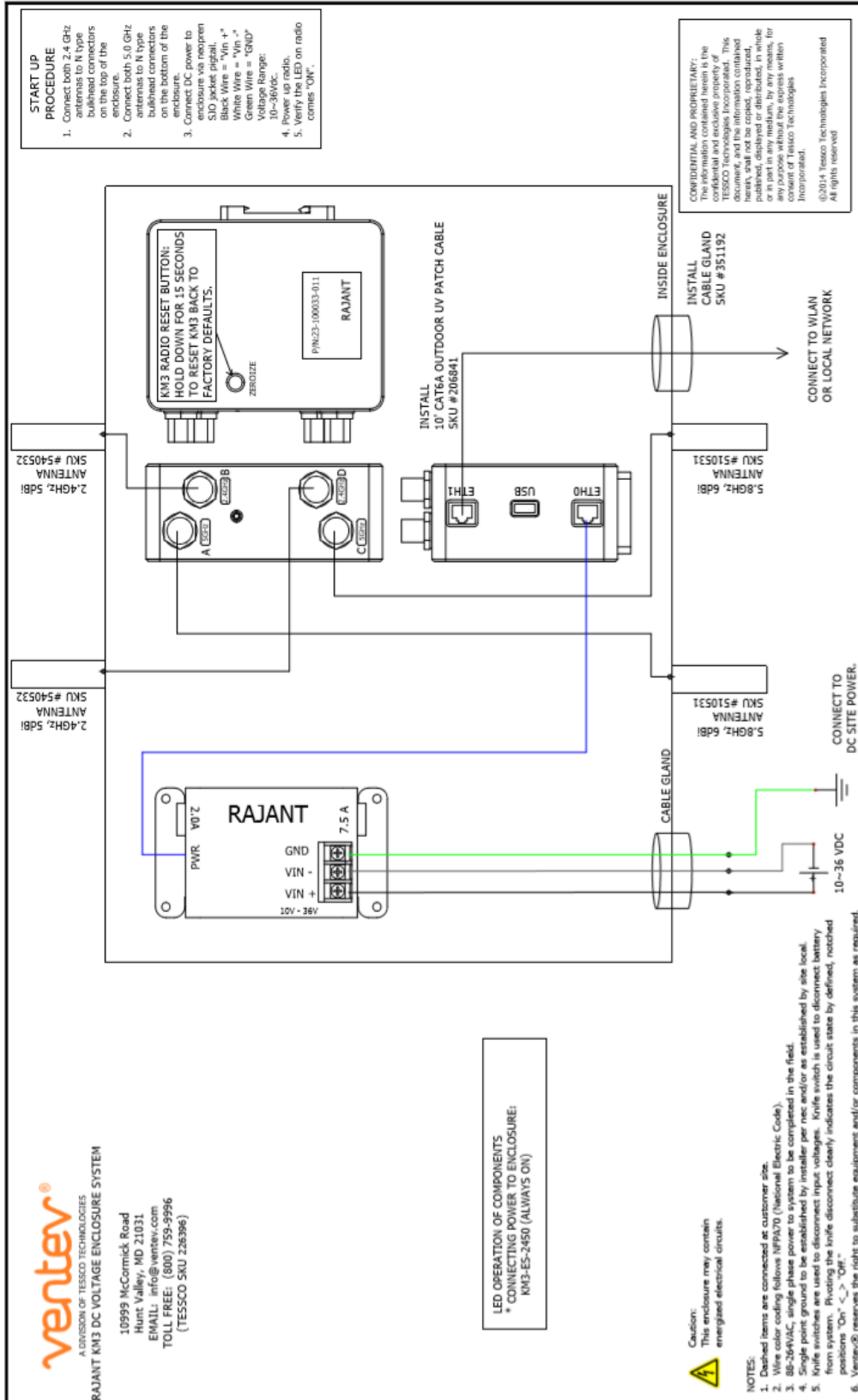
16. Verify that the circles under the flags column in the "BREADCRUMB TABLE" tab are green. A green circle means the radios are connected. A blue circle means the radios are not connected. If the blue LED is nonoperational, then the either the antennas are not operational.
17. Link on the "TOPOLOGY VIEW" tab.
18. From the main menu, select VIEW -> TOPOLOGY LAYOUT -> DEFAULT LAYOUT
19. Click on the light blue and green links between the radios in the "TOPOLOGY VIEW" tab to verify all the antennas are connected. There will be data listed in all fields in the pop-up window (shown above). The antenna with no data listed is not operational.

Screen shot of Steps #18 and #19



20. Click on the radio with serial number under test in the "TOPOLOGY VIEW" tab. Click on the "PEERS" tab.
22. Verify all the antennas have good cost values. The cost should be under 1000. If the cost is over 1000, then there is interference in the area where the enclosure system is deployed which is not allowing it to connect. The enclosure system will need to be relocated.

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