SAMSUNG

SERVICE GUIDES
E487 ERROR CODE
Tech Support (888)-699-6067 7am to 6pm CST (M-F)

Revision Date: 1/13/2025
Subject: E487 Error Code
Models: DVM, CHILLER
Title: "Hall" sensor (RPM sensor) in Outdoor Fan Motor 1

Fan #1 is on the left-hand side of unit

Fan 1 is on the left-hand side of the unit

Troubleshooting Steps: Condenser with 2 Fans

1. Remove power to the condensing unit for a minimum of 15 minutes.
2. Inspect the fan blade and make sure there are no obstructions.
3. Verify blade spins freely
4. There are two plug connections for each fan motor. Power (red, white, and black) and hall effect sensor (See fan motor connector image).
5. Follow and inspect wiring. Make sure there is no damage to wires or plugs.
6. Make sure all plugs and spade connectors are secure and connected properly.
7. Disconnect power plug (Fan motor 1 is white plug, Fan motor 2 is blue plug), check resistance at plug going to Fan motor. Red to White, White to Black, Red to Black. The resistance value between each winding should be equal, under 10Ω and open to ground.
8. Reverse connector plugs to fan motor 1 and fan motor 2 (Fan motor and Hall Effect plug).
9. Restore power to the unit. If the error E487 returns, replace fan PCB. If the error changes to E387, replace fan motor.

If results are inconclusive, and you have an inverter checker tool, continue to inverter Fan PCB test.

See the Video showing this troubleshooting technique. Click the icon below:

10. Remove power from the unit for a minimum of 15 minutes. Remove Fan connections from Fan PCB and connect inverter checker.
11. Restore power to unit. Press K2 button 11 times to initiate the inverter test for fan motor 1.
12. If the inverter test fails, replace Fan PCB. If it passes, replace Fan motor


FAN Motor Connector


Hall-sensor Connector

Proper Personal Protective Equipment (PPE) Required. These photos may not represent your exact system.
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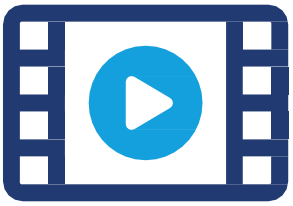
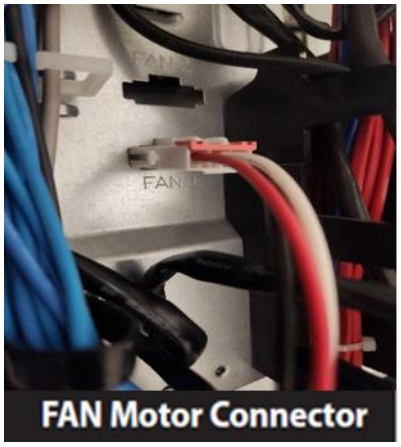
Troubleshooting Steps: Condenser with 1 Fan

1. Remove power to the condensing unit for a minimum of 15 minutes.
2. Inspect the fan blade and make sure there are no obstructions.
3. Verify blade spins freely.
4. There are two plug connections for each fan motor. Power (red, white, and black) and hall effect sensor (See fan motor connector image).
5. Follow and inspect wiring. Make sure there is no damage to wires or plugs.
6. Make sure all plugs and spade connectors are secure and connected correctly.
13. Disconnect power plug (Fan motor1 is white plug)), check resistance at plug going to Fan motor. Red to White, White to Black, Red to Black. The resistance value between each winding should be equal, under 10Ω and open to ground.
7. If all values are within range, remove fan connections from board and connect inverter checker to Fan PCB.
8. Press K2 button 11 times to initiate the inverter test for fan motor 1. Inverter test video
9. If the inverter test fails, replace Fan PCB. If it passes, replace Fan motor.

See the Video showing this troubleshooting technique. Click the icon below:





***** Before reconnecting any wire harnesses, leave the unit powered OFF for 15 – 20 min*****