

***ISIMET* -Utility Controller Ver 9.1 TROUBLE SHOOTING GUIDE**

ISIMET

ISIMET recommends that you view and become familiar with the Start-up & Trouble Shooting Slides prior to attempting to trouble shoot problems with the *ISIMET* Utility Controller. You should also have thoroughly read the Installation, Operations & Maintenance Manual for the unit on which you intend to perform service.

Have on hand a copy of the O & M along with a "PCB - Configuration Chart". Refer to this chart for locations of components described in this guide. PCB functions change based upon configurations of the programming code. Review the details in this Chart in order to determine if the specific indication of a problem is related to configuration or is actually a problem with the unit.

ISIMET does not recommend the practice of random replacement of components to rectify a problem with operation. This guide will step through the normal causes of failures so that specific cause can be determined. If after performing the trouble shooting procedures defined in this guide and the unit or module remains non-operational, then that component should be replaced.

If uncertain about the issues concerning the Utility Controller, *ISIMET* recommends that you contact your local factory representative.

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I Problem – No Power at All to the Utility Controller

1. The panel service switch should illuminate when ON.
2. Check the panel's 5 Amp fuse. Replace if necessary.
3. Check Junction Box Connections for proper wiring connections.
4. If the Utility Controller is independently connected to a circuit breaker, check to see if the breaker is engaged.

With power ON, 24-vac should be read @ pins 2 & 3 on CON 3 of the PCB.

II Problem – POWER LED on PCB does not illuminate when Utility Controller is turned ON

NOTE: For the unit to operate, the POWER LED, LED09 should be illuminated.

1. If no voltage (3-VDC), at CON 2 then either FUSE 1 or FUSE 3 could be blown. FUSE 1 is 5X20MM slowblow. FUSE 3 is 500mA fast acting. Replace fuses as required.
2. Voltage regulator (U02) may be non-functional, missing, or installed incorrectly. Verify correct placement and functionality.

III Problem – EMS LED on PCB does not illuminate when Utility Controller is turned ON

NOTE: For the unit to operate, the EMS LED should be illuminated.

1. If wiring is connected at Terminal 1, Posts 26 & 27 on the panel, determine if connection should be for dry-contact or input voltage configuration.
2. If pcb is configured for voltage, test for voltage.
3. If voltage reads 5-VDC, then a jumper should be in place at JP05. If 24-vac/vdc, then remove jumper.
4. If configured for dry-contact then JP05 should have no jumper in place.
5. If no voltage or wiring, determine if the unit is programmed for internal time clock. In this case, EMS LED will only illuminate once the key has been engaged.
6. If not, check for jumper at right 2 pins on CON08. This jumper simulates an EMS input signal and should be removed once a signal can be provided. If the unit is intended to operate without EMS then this jumper should remain.
7. If this LED does not illuminate contact your Manufacturers Representative.

With an EMS input signal to the PCB, there should be no jumper at CON08.

IV Problem – 24-vac to the PCB, but the unit will not operate

With EMS LED ON, the unit should operated unless.

1. Is the *PANIC, ALARM, Gas Detector, or Isolated Panic* LED ON? If yes, then either a signal is present that prevents operation. Refer to **V- Problems with PANIC & ALARM Signals** for further explanations and remedies if these LED's are illuminated.
2. Check the door panel plug (15-pin connector) to verify firm connection.
3. Check CON 10 to verify jumpers at pins 5 & 6; 7 & 8; 9 & 10.
4. Examine wiring at the door panel to assure that no wiring has become loose during either shipping or installation. Tighten loose screw connectors.
5. Re-test for operation of the unit.

With power ON, EMS LED ON, ALARM, ISOLATED PANIC & PANIC LED's OFF, Door switch ON and engagement of key switch, unit should operate. GAS DETECTOR should effect only those outputs determined by programming to be effected by this input signal.

V Problem – Green Door LED’s are on, but service is not activated

1. Check Terminal 2 of control panel for proper and firm wiring connections.
2. Test for circuit continuity from at corresponding posts and COM at Terminal 2.
3. Check the 24 vac output fuse on the PCB. FUSE 1. Replace if necessary.
4. If the output LED on the PCB ON for the active circuit? (LED 1, LED 2 or LED 3)?
5. When activated, check terminal 2 connections for 24-vac.
6. Check to see if services have been turned on.
7. Check wiring connections at solenoids and electrical contactors.

With the Green LED, the pcb output LED illuminated, and 24-vac voltage at Terminal 2 output post and COM, the service should be ON.

VI Problems with PANIC & ALARM Signals

NOTE: With either an *ALARM*, *PANIC* or *ISOLATED PANIC* LED illuminated, the unit will not operate. Check wiring at Terminal 1 for all of the issues. If input is dry-contact then resistance will be present at posts. If input is voltage then 24-vac should typically be ready at posts. Refer to O&M for pcb jumper configurations.

1. Verify that no input signal is present at ALARM INPUT (posts 20 & 21). If a signal is present, terminate the connection or signal for test purposes.
2. Verify that if a remote Panic Button or Shower Monitoring or any other device is attached to the Auxiliary Panic Input terminals (posts 13 & 14) that the wiring from this unit to the Controller does not run within conduit that carries other wiring. The sensing of current from other sources across this wiring will cause the unit to be placed into PANIC and will eventually damage the PCB. Verify that a dry-contact signal is not present.
3. Verify that no input signal is present at ISOLATED PANIC INPUT (posts 24-25). If a signal is present, terminate the connection or signal for test purposes.
4. Verify that no input signal is present at posts 22-23 or 18-19. If a signal is present, terminate the connection or signal for test purposes.

With these input signals removed or terminated for test purposes, the unit should operate.

CAUTION: We DO NOT recommend that the unit be placed back into service without connections made to remote devices or systems that are intended to provide specific control signals for the unit. The problem if apparent originating from that remote system or device should be diagnosed and remedied prior to operating this unit.

VII Problem – PCB output circuit resets to OFF or the integral Panel Reset trips

1. Verify that amp loads at each output circuit does not exceed load limits (1.5 amp per circuit or 2 amp for 3000-4000 units). Solenoids and remote operators that are directly connected to output circuits of the unit, requiring amperage in excess of this limit, will cause the circuit to reset and may cause damage to the unit.
2. With power OFF, test ohms at output terminal 2 on control panel at output post 2 and COM and 3 and COM. Between 2 and COM & 3 & COM about 4 to 9 ohms should register. If not, there is the possibility that a solenoid coil is failing, causing a gradual overload to the output circuit. You should test the coil again at the solenoid with the wiring from the controller removed. Replace damaged coils.
3. Verify that 24-vac output and 120-vac line wiring does not route within common conduit. If it does, there will be a continual interference between the circuits causing this problem. The only solution is for the wiring to be isolated per ISIMET recommendations.

REFER to Supplemental Wiring Instructions for complete directions for all wiring circuits for the ISIMET Utility Controller.

VIII Problem – PCB output fuse continues to fail

1. With power OFF, test ohms at output terminal 2 on control panel at output post and COM. If a direct short is registered, you should test wiring, the coil or remote operator again at the location of the device with the wiring from the controller removed. Replace damaged coil or other remote operator or device.
2. Verify that a direct short is not present on any of the wiring at terminal 2 and the remotely located operator. Correct the deficiency.
3. Verify that total amp loads does not exceed specified load limits for the unit.

PCB Fuse 1 (slow blow) is intended to protect the PCB from damage caused by circuit overload or short circuit. When replacing this fuse, do not exceed the rating established for the unit.

IX Problem – Output Notification Signals do not operate or function properly

24-vac & dry-contact outputs are available on the control panel. Configuration of the Panic Output @ posts 11-12 is accomplished at JP 7 on the PCB.

1. Verify that JP 7 is configured as desired.
2. Verify that DPDT relay K08 closes upon PANIC. Adjacent LED should illuminate.
3. Verify that wiring to the remotely located monitoring device or system is in tack.

24-vac is transmitted to the remote switching circuitry during normal operation of the unit.

X Problem – The RF module does not function

The module plugs into CON 10 on the PCB. (The three jumpers are removed) The antenna is mounted through the unit's base. Coax is connected from the antenna to the module.

1. Verify that the module's plug is firmly connected to CON 10 and wiring has not become dislodged.
2. Verify that the coax cable is in tack.
3. Verify that the encrypted code printed on the module corresponds to that on the keyfob.
4. Test the battery in the keyfob. Replace as needed.
5. Test each of the functions of operation of the keyfob to determine which operation fails.

If wiring is correct, then the normal manual function of the unit' door should operate.