

Title: Power Failure Test
Objective: Verify system is installed using acceptable standards and practices, communicates properly, and provides proper protection of assets and meets or exceeds the contract performance specification.
Applicability: Backup Power, ACS, IDS
Notes: <ol style="list-style-type: none"> 1. Procedures are designed assuming a system consisting of an Access Control Unit (ACU) (for example a door controller) with associated devices that is connected to a workstation. 2. Take appropriate safety precautions because this test involves energized power sources. 3. If backup power is batteries, a multi-meter or voltage meter is required to test voltage. 4. Real-time voice communications between the workstation operator and the field technician is required. 5. Perform these tests with the associated zone in the SECURE state.

Steps	Actions	Expected Results
1.0	<u>AC Power Loss and Restoration Test</u>	
1.1	Disconnect AC power from the ACU.	AC power failure alarm is received at the workstation. No intrusion alarms are generated from the power loss. System continues to operate correctly.
1.2	Reconnect AC power to the ACU.	Workstation notifies that AC power has been restored. No intrusion alarms are generated from the change in power source. System continues to operate correctly. AC power failure alarm is not cleared until acknowledged at the workstation.
1.3	Clear alarm at workstation.	Active alarm queue is empty.
2.0	<u>Backup Power Duration Test</u>	
2.1	Allow the system to run under normal conditions on battery power. Note the time of disconnection from AC power. (If backup power is a battery, measure the voltage of the battery immediately after disconnecting AC power).	System switches to backup power without issues. (If battery backup is used, document the measured voltage.)
2.2	Allow the system to run until at least the required duration has passed. (If backup battery is used, measure the voltage of the battery prior to reconnecting the AC power in the next step).	System operated correctly for the entire required duration. (If battery backup is used, document the measured voltage.)
2.3	Reconnect AC power.	System switches to AC power without issues.
3.0	<u>Battery Recharge Test (if applicable)</u>	
3.1	After Backup Power Duration Test has been performed, reconnect AC power and note the time.	System switches to AC power without issues.
3.2	Allow the system to run for the required recharge duration.	System operated correctly for the entire required duration.
3.3	Measure the battery's voltage.	Voltage on the battery has returned to full value as measured in the Backup Power Duration Test.