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| **Title:** Line Supervision 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. Also verifies the ability of a system to recover after a communications failure. |
| **Applicability:** Sensors,Transmission lines, Panels (FDBs and ACUs), Workstations, Servers, IDS, ACS. |
| **Notes:**   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. The field technician may need keys to access components in locked rooms for these tests. 3. A detailed link testing list is essential to ensuring 100% system testing. 4. The purpose of alarm annunciation is to provide a correct and useful location of the alarm. 5. Real-time voice communications between the workstation operator and the field technician is required. 6. Verify that alarms annunciate quickly and meet appropriate standards. |

| **Steps** | **Actions** | **Expected Results** |
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| **1.0** | **Communications Failure and Access Control Unit (ACU) Test** |  |
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| 1.1 | Disconnect the network communication line at the ACU. | Network communication failure alarm received at the workstation. |
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| 1.2 | Repeat access, access denied, egress, and alarm (door held or door forced) tests. | Tests results are consistent with the results from the respective tests, but alarms are not received at the workstation. |
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| 1.3 | Reconnect the communications line. | Workstation receives all system transaction logs and alarms from tests performed while communications were disconnected. Workstation shows communications have been restored. |
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| 1.4 | Clear the alarms at the workstation. | The active alarm queue is empty. |
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| **2.0** | **ACU to Credential Verification Device Failure Test** |  |
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| 2.1 | Disconnect the communication line from the ACU to the credential verification device. | Line supervision alarm received at the workstation. |
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| 2.2 | Repeat Valid Credential test. | Device is unresponsive, door lock does not release. |
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| 2.3 | Reconnect the communication line from the ACU to the credential verification device. | Line supervision alarm is still active. |
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| 2.4 | Clear the alarms at the workstation. | The active alarm queue is empty. |
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| 2.5 | Repeat Valid Credential test. | Transaction logged at the workstation. Door lock releases. |
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| **3.0** | **Open Circuit Test (conduct this test for each device)** |  |
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| 3.1 | Disconnect the device signal lead from the ACU. | Line supervision alarm received at the workstation. |
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| 3.2 | Reconnect the device signal lead from the ACU. | The alarm is still active. |
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| 3.3 | Clear the alarms at the workstation. | The active alarm queue is empty. |
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| **4.0** | **Short Circuit Test (conduct this test for each device)** |  |
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| 4.1 | Place a jumper wire across the terminal blocks for the input and short the device’s input wires together. | Line supervision alarm received at the workstation. |
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| 4.2 | Remove the jumper wire. | The alarm is still active. |
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| 4.3 | Clear the alarms at the workstation. | The active alarm queue is empty. |
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