WSDOT Test Method T 424

Test Method for Traffic Controller Power Interruption Test Procedure

1. SCOPE
   This test method is intended to evaluate traffic signal controllers for the Power Interruption test defined in NEMA TS-1 2.2.7, as modified, and is not required for the Type 2070 controllers. This test is to be performed at normal voltage and room temperature.

2. REFERENCE DOCUMENTS
   NEMA Publication TS-1

3. SAFETY
   Use proper equipment and training to reduce the risk of electrical shock

4. APPARATUS
   A power interrupting device capable of interrupting the controller power for supplied to the controller cabinet of predetermined time intervals as defined in NEMA TS1.

5. PROCEDURE
   a. Program the controller unit to cycle on minimum recall.
   b. Connect the controller cabinet to the power interrupting device as outlined by the manufacture's instructions.
   c. Apply power to the system with the power line modifier connected as required.
   d. NEMA Remove the input voltage for a period of 450 milliseconds. Upon restoration of the input voltage, check to insure that the controller unit continues normal operation as though no power interruption had occurred. Repeat this test three times.
   e. Type 170 Remove the input voltage for a period of 1500 milliseconds. Upon restoration of the input voltage, check to insure that the controller unit continues normal operation as though no power interruption had occurred. Repeat this test three times.
   f. NEMA Remove the input voltage for a period of > 500 milliseconds. Upon restoration of the input voltage, check to insure that the controller unit reverts to its start up sequence. Repeat this test three times.
   g. Type 170 Remove the input voltage for a period of > 2000 milliseconds. Upon restoration of the input voltage, check to insure that the controller unit reverts to its start up sequence. Repeat this test three times.
   h. Restore normal supply to the cabinet.

6. REPORT
   Record any response found to be in disagreement with the published standards. Report pass or fail and any corrective actions taken on the test report.
Performance Exam Checklist

*Test Method for Traffic Controller Power Interruption Test Procedure*

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Participant Name ___________________________ Exam Date __________

**Procedure Element**

1. Program traffic controller for minimum recall.  
   Yes ☐ No ☐
2. Connect traffic controller to power interrupter per the manufacturer's recommendations.  
   Yes ☐ No ☐
3. Verify traffic controller operates normally for the prescribed interruption.  
   Yes ☐ No ☐
4. Verify traffic controller reverted to the start-up sequence.  
   Yes ☐ No ☐
5. Restore normal power to the cabinet.  
   Yes ☐ No ☐
   Yes ☐ No ☐

First attempt: Pass ☐ Fail ☐  
Second attempt: Pass ☐ Fail ☐

Signature of Examiner ____________________________

Comments: