
Recommended Instructions for Switch Circuit Controllers

Revised 2025 (2 Pages)

A. Introduction

This Manual Part recommends instructions that apply to the installation, maintenance and test of switch circuit controllers. Instructions for circuit controllers within switch-and-lock movements or facing point locks are covered in Manual Part 2.4.10 Recommended Instructions for Interlockings.

B. General

1. Work that may interfere with safe operation of trains shall not be started until train movements have been fully protected. Temporary work, repairs or adjustments, when required, shall be made in such manner that safety of train operation will not be impaired. When repair, adjustment, change or replacement is made, tests shall be made immediately to determine that the apparatus functions as intended. When making tests of apparatus, proper instruments should be used and it shall be known that no unsafe conditions are created by the application of testing equipment.
2. Circuit controller shall be positioned as instructed and securely fastened in place.
3. Circuit controller shall be installed and maintained so that the contacts will be positioned as instructed.
4. Circuit controller connected at the point of switch, split point derail, or moveable point frog, shall be maintained so that its contacts will not be in position corresponding to switch point closure when switch point is open $\frac{1}{4}$ in (6.35 mm) or more.
5. Circuit controller operated by an independently operated derail, other than the split point type, shall be maintained so that the normally open contacts will remain closed and normally closed contacts will remain open when controller connecting rod movement exceeds 1 in (25.4 mm) toward non-derailing position.
6. Tests shall be made as instructed to determine that:
 - a. Movement of train over switch, derail, or moveable point frog will not cause contacts to open or close improperly.
 - b. Circuit controller contacts meet resistance requirements.
7. Contacts should be kept clean and in proper adjustment as instructed. Contact opening must be not less than 1/16 in (1.59 mm) when open.

8. Moveable parts should be kept clean, properly adjusted and lubricated as instructed.
9. Components that fail to perform their intended functions shall be adjusted, repaired or replaced.
10. Covers, gaskets and fastenings should be kept in good condition to prevent the entrance of moisture, dirt, etc.
11. Ventilator screens and gaskets should be in place and kept free of paint or other obstruction.
12. Wire and cable entrances should be properly sealed to prevent entrance of moisture, rodents, insects, etc.
13. Threads of rods, jaws and bolts should be kept clean and properly lubricated.
14. Paint should be applied as instructed.
15. Where circuit controllers are equipped with centering attachments, they should be maintained and tested as instructed. They may be tested by disconnecting the operating rod and moving the crank by hand to the full normal position and then to the full reverse position. When released from either position, it should assume an approximate vertical position. When released, the contact shall be open for a normal or reversed closed circuit, or closed if a part of the track shunting circuit.
16. Where an insulated ball stud is used in the operating crank, it should be given an insulation test as instructed.
17. Circuit controllers removed from service for repairs should be returned with full information as required on authorized repair tag or as instructed.
18. Results of inspections and tests herein required and all other inspections and test that may be required shall be recorded as instructed.