

Eaton's Cooper Power Series

SecTER™

Sectionalizing Terminal Enclosure

Certified Test Report

SecTER Sectionalizing Terminal Enclosure

CERTIFICATION

*Statements made and data shown are, the best of our knowledge and belief,
correct and within the usual limits of commercial testing practice.*



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Sr. Principal Engineer

INTRODUCTION

This test report certifies that Eaton's Cooper Power™ series SecTER™ Sectionalizing Terminal enclosures were successfully tested to Section 4 Enclosure Security of IEEE Std C57.12.28™-2014 standard "*IEEE Standard for Pad Mounted Equipment – Enclosure Integrity*".

TEST PROGRAM

Products Tested:

SecTER enclosure 24" wide by 30" high by 22" deep mild steel with penta-head bolt and shrouded lock.
SecTER enclosure 66" wide by 30" high by 22" deep mild steel with penta-head bolt and shrouded lock.
SecTER enclosure 84" wide by 30" high by 22" deep mild steel with penta-head bolt and shrouded lock.

The above sizes are typical of the full line of SecTER cabinets. All standard cabinets utilize similar design elements.

Objective:

Verify that the SecTER enclosure design meets Section 4 Enclosure Security of IEEE Std C57.12.28™-2014, standard for resistance to unauthorized entry.

Testing Plan – General:

The enclosures were submitted to the sequence of tests as described in section 4 of IEEE Std C57.12.28™-2014 standard. The enclosures were subjected to the pry test, the wire probe test, the pull test, another wire probe test, the deflection test, and finally the operation test. Prescribed forces are indicated in the detailed description of each test.

Testing Plan – Specific Procedures:

Pry test: The pry bar was used on all joints, crevices, hinges, locking means and any other objects that exist between the enclosure components including the enclosure/pad interface. The tip of the pry bar was first inserted into the opening being tested using an axial force of 50 lbf. Then, with the axial force of 50 lbf being maintained, a prying force of 900 lbf-inch was applied first in one direction and then in the opposite direction. The axial and prying forces were maintained so long as relaxation occurred. When relaxation ceased, or if no relaxation occurred, the pry bar was removed and the pry test was reapplied at the same location. When relaxation ceased or if no relaxation occurred after the second test, the pry bar was removed and then applied at an untested location.

Pull test: The pulling force was applied to the critical points of all enclosure parts that could be engaged by the pulling hook. The pulling force of 150 lbf was exerted at any angle to the enclosure surface and maintained during any relaxation. When the relaxation ceased, or if no relaxation occurred, the test was terminated. The hook was then inserted into any other part in which it could engage, and the test was repeated at the new location. All parts that could be engaged by the pull hook were tested once.

Wire probe test: Following the pry and pull tests, an attempt to penetrate the enclosure with the probe wire was made. The penetration was attempted at all crevices and joints. The 14 gauge bare copper wire was straight with no pre-bends and was gripped by the tester with his bare hands. When the wire entered the joint, the wire was continually pushed and bent until it could no longer be pushed.

Deflection test: The deflection test was applied to all sides and walls of the enclosure. A 100 lbf was applied perpendicular to the surface of the enclosure.

Operation test: Following all of the above tests, the enclosure was lifted at least one meter and then set again on the flat surface. The doors were opened, closed, latched, and locked.

Results of the testing:

The wire probe never entered the main cavity of the enclosure during the probe test after both the pry and pull tests. The deflection test did not result in impairment of the dielectric nor mechanical performance of the enclosure. Following all tests, the doors were able to be freely opened, closed, latched, and locked without issue.



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