



S&C ELECTRIC COMPANY

GENERAL OFFICES • CHICAGO

Specialists in High-Voltage Switching and Protection

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Reference Number: 40-CERT85-109
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CERTIFIED TEST ABSTRACT

Fault Interrupting at 60 Hz

TYPE OF EQUIPMENT

S&C Fuse Cutout — Type XS — Outdoor Distribution — Extra-Heavy-Duty Overhead Pole-Top Style, Catalog No. 89071R11

| | | |
|--|--------|----|
| Maximum Voltage | 15 | kV |
| BIL..... | 110 | kV |
| Amperes Maximum..... | 200 | A |
| Asymmetrical Interrupting Current..... | 12,000 | A |

APPLICABLE TEST SPECIFICATIONS

Test procedure in accordance with ANSI/IEEE C37.41-1994, *IEEE Standard Design Tests for High-Voltage Fuses, Distribution Enclosed Single-Pole Air Switches, Fuse Disconnecting Switches, and Accessories*, and ANSI C37.42-1989, *Distribution Cutouts and Fuse Links — Specifications*.

TEST RESULTS

S&C Test Reference Number: 9812

Successful interrupting test results are presented in the following table, "Interrupting Test Results — Fault Current Testing."

**INTERRUPTING TEST RESULTS
 FAULT CURRENT TESTING**

| Required Test Current Levels | | TEST SERIES | | | | | | | | | |
|---|------------------|--------------------------------------|------|--|------|--|------|--------------------------|--|------------------------------------|--|
| | | 1 | | 2 | | 3 | | 4 | | 5 | |
| | | Rated Interrupting Current +5% / -0% | | From 70% to 80% Rated Interrupting Current | | From 20% to 30% Rated Interrupting Current | | From 400 to 500 Amperes | | From 2.7 to 3.3 X Fuse Link Rating | |
| 60 Hz Recovery Voltage, kV | | 15.0 | | 15.0 | | 15.0 | | TEST SERIES NOT REQUIRED | | 15.0 | |
| X/R Ratio | | 13.5 | | 13.1 | | 13.6 | | | | 1.2 | |
| Transient ¹ Recovery Voltage | kHz | 2.38 | | 2.33 | | 2.50 | | | | Not Applicable | |
| | PKF ³ | 1.41 | | 1.31 | | 1.30 | | | | 776 ⁴ | |
| Prospective Current rms Amps | Sym. | 8,000 | | 6,210 | | 2,090 | | | | — | |
| | Asym. | 12,200 | | 9,430 | | 3,190 | | | | 140K | |
| Fuse Link Rating | | 140K | 200T | 140K | 200T | 140K | 200T | | | | |
| Making Angle Related to Voltage Zero, Degrees ² | 0 | X | X | X | X | | | | | | |
| | 90 | X | X | X | X | X | X | | | X | |
| | 140 | X | X | X | X | | | | | | |
| Number of Tests | | 3 | 3 | 3 | 3 | 1 | 1 | 2 | | | |
| Number of Tests on Each Cutout | | 3 | 3 | 3 | 3 | 2 | | 2 | | | |
| Duration of Normal Frequency Recovery Voltage After Interruption, Seconds | | 0.5 | | 0.5 | | 0.5 | | 0.5 | | | |

1. The prospective transient recovery voltage is described by a natural frequency and a peak factor.
2. X indicates a performed test. All tests were successful.
3. PKF (Peak Factor) is the ratio of the prospective first peak of the transient recovery voltage to the instantaneous value of the 60 Hz source voltage at the moment of current interruption.
4. This current results in a melting time of approximately 2 seconds.

STATE OF ILLINOIS)
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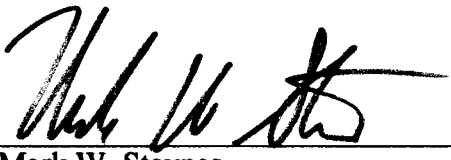
Mark W. Stavnes, being sworn, states that: He is Assistant Manager – Product Engineering – Fuse Products Division for S&C Electric Company and is authorized to execute this certificate on its behalf; and said tests were conducted in the manner above set forth, and the results are accurately reported above.

Subscribed and sworn to before me
this 10 day of November 1998.

S&C ELECTRIC COMPANY



Affixed hereon is my Cook County,
Illinois Notary Public Seal

by 

Mark W. Stavnes
Assistant Manager – Product Engineering
Fuse Products Division

