

**S&C ELECTRIC COMPANY**

GENERAL OFFICES • CHICAGO

*Specialists in High-Voltage Switching and Protection*

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**CERTIFIED TEST ABSTRACT**

**Mechanical Tests  
Mechanical Operations  
Thermal Cycle**

**TYPE OF EQUIPMENT**

**S&C Fuse Cutout — Type XS — Outdoor Distribution — Overhead Pole-Top Style**, with the following mounting configuration, catalog number, and ratings:

<b>Catalog Number</b>	<b>Style*</b>	<b>kV Max.</b>	<b>kV BIL</b>
89021R10-P	EHD	15	110
89031R10-P	UHD	15	110
89071R11-P	EHD	15	110
89221R10-P	DISC	15	110

\*EHD = Extra-Heavy Duty

\*UHD = Ultra-Heavy Duty

\*DISC = Disconnect

**APPLICABLE TEST SPECIFICATIONS**

Test procedure in accordance with ANSI/IEEE C37.41-2000, *IEEE Standard Design Tests for High-Voltage Fuses, Distribution Enclosed Single-Pole Air Switches, Fuse Disconnecting Switches, and Accessories*.

**TEST RESULTS**

S&C Test Reference Numbers: 11410, 11428

The samples tested were all Type XS Fuse Cutout Catalog No. 89021R10-P. The testing results are fully applicable to the other Type XS Fuse Cutouts listed under Type of Equipment,

since the mounting live parts and insulation are common and the fuse holder is the same physical size.

Upon completion of 200 close-open mechanical operations on each of three samples, the cutouts remained fully operational, and there were no cracks in the polymer insulator body or any looseness of the insulator inserts. All hardware was tight. Additionally, 25 closings from an angle of approximately 45° to the left of the cutout center and 25 closings from an angle of approximately 45° to the right of the cutout center were also performed. Again, the insulator was not damaged and all hardware remained tight. These angled operations are not required by the standard.

Upon completion of 10 thermal cycles on five samples (without fuse holder or blade) — each cycle consisting of exposure to water at room temperature (20°C), air at -40°C, and air at +60°C — no cracks were found in the polymer insulator. All hardware was tight.

The torque test was not performed since it is not applicable to the design of the S&C Type XS Fuse Cutout.

STATE OF ILLINOIS )  
 )ss  
COUNTY OF COOK )

Mark W. Stavnes, being sworn, states that: He is Manager — Fuse Product Engineering — Fuse Products Division of 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 26 day of July 2002.

S&C ELECTRIC COMPANY

Maureen L. Zick  
Affixed hereon is my Cook County,  
Illinois Notary Public Seal

by Mark W. Stavnes  
Mark W. Stavnes  
Manager — Fuse Product Engineering  
Fuse Products Division

