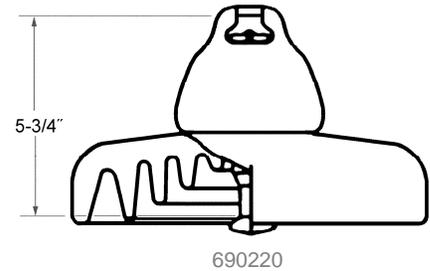
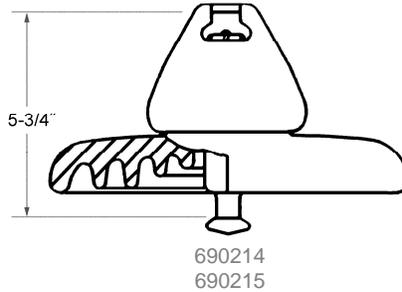
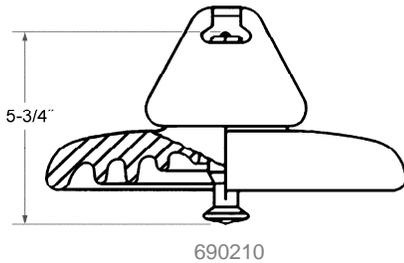


**INSULATORS, SUSPENSION  
 PORCELAIN BALL AND SOCKET TYPE**



**1. Scope**

This specification covers 10-inch diameter standard and fog type porcelain ball and socket type suspension insulators.

**2. Industry Standards**

Insulators shall meet all applicable requirements of the following National Standards:

ANSI Standard C29.2-1992 (R1999), Wet-Process Porcelain and Toughened Glass - Suspension Type Insulators.

**3. Requirements**

Stock Number	690210	690214	690215	690220
ANSI Class	52-3	52-5	52-5	52-3*
Leakage Distance, in.	11.5	11	11	17
M&E Strength, lbs.	15,000	25,000	25,000	15,000
Flashover, kV, Dry	80	80	80	80
Flashover, kV, Wet	50	50	50	50
Color	brown	gray	brown	gray

\* Increased leakage version of 690210.

**4. Cotter Pins**

Shall be made of stainless steel and shall be self-retaining and self-locking after installation.

**5. Marking**

Each insulator shall bear symbols identifying the manufacturer and giving the year of manufacture and the tension proof load in pounds, identified by the word "TEST". The markings shall be legible and durable.

STANDARDS COORDINATOR

*Charles L. Shaffer*

Charles L. Shaffer

STANDARDS SUPERVISOR

*John E. Skinner*

John E. Skinner

UNIT DIRECTOR

*Hardev Jui*

Hardev Jui

**MATERIAL STANDARD****6. Packaging**

Insulators shall be securely crated and assembled with cotter pins in place. Class 52-3 and 52-5 insulators shall be assembled in six-unit strings, and the fog type insulators in five-unit strings. Each crate shall be marked with the manufacturer's name and catalog number of the insulators contained therein.

**7. Stock Unit: EA****8. Approved Manufacturers**

Stock Number	Catalog Numbers	
	Lapp	NGK-Locke
690210	8200	20S840 (brown)
690214	5960A-70	30S255 (light gray)
690215	5960A	—
690220	302268-70	CA-826MC (light gray) or CA-825ME (brown)*

\* This item is non-conforming in color. Purchase only with specific approval of transmission engineer.