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>Date: Tue, 26 Jan 1999 09:06:26 -0600  
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>Subject: FESHM 5045/5046  
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>These two chapters were reviewed by the electrical safety subcommittee and  
>found to be current. No changes were made. Pls re-issue with a 1/99  
>revision date. Do not need to be posted.

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>The Patience Prayer:  
>  
>God grant me patience  
>... and I want it right now!

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FESHM\_5045\_1991.doc FESHM\_5046\_1991.doc

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## HIGH VOLTAGE COAXIAL CONNECTORS

### INTRODUCTION

This chapter identifies certain requirements and prohibitions relative to the use of high voltage coaxial connectors. Recommendations are made for standard connectors to be used for several voltage ranges.

### REQUIREMENTS

1. In general, connectors for high voltage use are to be chosen such that they are incompatible with connectors for signal cables.
2. Connector components properly rated for the intended application shall be used. Systems requiring voltages above 20kVDC shall utilize connectors specified for the maximum design voltage.
3. In particular, because of the well-known physical compatibility with BNC connectors, which have a lower voltage rating, the use of MHV connectors is prohibited.
4. Where possible, red-jacketed cable should be used for high voltage applications.
5. The chassis connector shell shall be solidly grounded to the panel on which it is mounted.
6. A "D" hole shall be used for mounting all panel connectors except flange mount type connectors.

### RECOMMENDATIONS

1. Standard Connectors For a System up to 5kVDC
  - a. The standard coaxial cable connector shall be the Kings Electronics 1705-2, AMP 51426-1 (for use with RG 58C/U), or equivalent (STK#1435-2110).

- b. The standard coaxial panel connector for flange mount type should be either Kings Electronics 1707-1 or AMP 51421, or equivalent (STK#1435-2120).
  - c. The standard coaxial panel connector for "D" hole mount type should be either Kings Electronics 1704-1, AMP 51494, or equivalent (STK#1435-2115).
  - d. The standard bulkhead adapter for coaxial applications shall be Kings Electronics 1709-1, AMP 225064, or equivalent (STK#1435-2100).
2. Standard Connectors For a System up to 10kVDC
- a. The standard coaxial cable connector shall be the Reynolds Industries P/N167-4535, the Kings Electronics 1065-2 (for use with type C cable), or equivalent (STK#1435-1700).
  - b. The standard coaxial panel connector shall be the Reynolds Industries P/N167-3555, the Kings Electronics 1064, or equivalent (STK#1435-4800).
  - c. The standard coaxial panel feed-through shall be the Reynolds Industries P/N167-3705 or equivalent (STK#1435-4850).
3. Standard Connectors For a System up to 20kVDC
- a. The standard coaxial cable connector shall be the Reynolds Industries P/N167-3516 (for use with RG 213/U) or equivalent (STK#1435-1750).
  - b. The standard coaxial panel connector shall be the Reynolds Industries P/N167-3517 or equivalent (STK#1435-4900).