FLUKE®

# Instruction Sheet

C-16
I-6

# 80K-40

## High Voltage Probe

### INTRODUCTION

The Model 80K-40 is a high voltage accessory probe designed to extend the voltage measuring capability of an ac/dc voltmeter up to 40,000 volts. The probe is a precision 1000:1 voltage divider formed by two matched metal-film resistors. The unusually high input impedance offered by these resistors minimizes circuit loading and thereby, optimizes measurement accuracy. A special plastic body houses the divider and provides the user with isolation and protection from the voltage being measured.

### SPECIFICATIONS

The 80K-40 will achieve specified accuracy when used with a voltmeter or multimeter (ac or dc) having an input impedance of 10 MΩ ±10%. Specifications for the probe are as follows:

***Voltage Range:** 0 V-40 kV dc or peak ac, 28 kV rms ac

**Input Resistance:** 1000 MΩ

**Division Ratio:** 1000 : 1 (1000X attenuator)

**Accuracy DC:**

**20 kV-35 kV:** ±{1% + (.1 x % deviation of multimeter load from 10 MΩ)} at 20°C - 30°C; add 1% at 10°C - <20°C and >30°C - 45°C

**0 kV- <20 kV and >35 kV-40 kV:** ±{2% + (.1 x % deviation of multimeter load from 10MΩ)} at 10°C - 45°C.

**Accuracy AC:** 60 Hz, ±5% at 10°C - 45°C.

* This probe is intended for low energy applications such as CRT and similiar circuits. It may be used in other circuits where the transient overvoltage due to lightning or load switching is limited 80 kV peak. Above 2000 meters altitude, and up to 5000 meters, derate working voltage from 40 kV peak to 28 kV peak, and derate the transient overvoltage from 80 kV peak to 57 kV peak. Transient overvoltage refers to micro-second duration impulses caused by lightning or load switching. See International Electrotechnical Commision Publication 664-1980, Clause 3.9 Table II, and Appendix A.

PN 481978 January 1978 Rev.4, 8/92
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