

# WARRANTY

The JOHN FLUKE MFG. CO., INC. warrants each instrument manufactured by them to be free from defects in material and workmanship. Their obligation under this Warranty is limited to servicing or adjusting an instrument returned to the factory for that purpose, and to making good at the factory any part or parts thereof; except tubes, fuses, choppers and batteries, which shall, within one year after making delivery to the original purchaser, be returned by the original purchaser with transportation charges prepaid, and which upon their examination shall disclose to their satisfaction to have been thus defective. If the fault has been caused by misuse or abnormal conditions of operations, repairs will be billed at a nominal cost. In this case, an estimate will be submitted before work is started, if requested.

If any fault develops, the following steps should be taken:

1. Notify the John Fluke Mfg. Co., Inc., giving full details of the difficulty, and include the Model number, type number, and serial number. On receipt of this information, service data or shipping instructions will be forwarded to you.
2. On receipt of the shipping instructions, forward the instrument prepaid, and repairs will be made at the factory. If requested, an estimate will be made before the work begins, provided the instrument is not covered by the Warranty.

"The foregoing warranty is in lieu of all other warranties, express or implied, including but not limited to, any implied warranty of merchantability, fitness or adequacy for any particular purpose or use. Fluke shall not be liable for any special, incident or consequential damages."

## Section 1

### Introduction & Specifications

#### 1-1. INTRODUCTION

1-2. The model 80F-15 is a high voltage probe designed primarily to measure DC voltages between 1 kV and 15 kV. The application of a 80F-15 probe with a compatible DVM will effectively extend the DVM's input range to a maximum of 15 kV with no more than 15V output. The accuracy and stability of the divider network is assured with the use of special metal filmed resistors having matched temperature coefficients which maintain a precise 1000 to 1 division ratio and a constant overall probe accuracy of  $\pm 0.01\%$  of the input.

1-3. The design of the 80F-15 allows direct mating to the input terminals of the Fluke voltmeters, thus improving safety of operation by reducing the number of high voltage connections. The 80F-15's probe body and the divider network is enclosed in high impact plastic which has extremely good insulating properties as well as providing maintenance free operation.

#### 1-4. SPECIFICATIONS

1-5. The following specifications are valid for DC voltages only. Refer to Table 1-1.

#### NOTE

*Impedance mismatch between the 80F-15 and the dvm which it is to be connected to will result in erroneous readings. For a list of input impedances which the 80F-15 is compatible with (when ordered) see table 6-1.*

Table 1-1. Specifications

<b>ELECTRICAL</b>	
Input Voltage Range . . . . .	1 kV to 15 kV
Input Resistance . . . . .	100 M $\Omega$
Division Ratio . . . . .	1000 to 1
Ratio Accuracy . . . . .	$\pm 0.01\%$ of input
(from 1 kV to 15 kV)	
Stability of Ratio . . . . .	$\pm 0.001\%$ /month, $\pm 0.05\%$ /year
Temperature Coefficient . . . . .	0.001%/°C
Voltage Coefficient; . . . . .	1 kV to 15 kV
(Less than $\pm 0.002\%$ total)	
<b>ENVIRONMENTAL</b>	
Temperature Range . . . . .	0°C to +50°C
Humidity Range . . . . .	0 to 80%
Altitude Range . . . . .	0 to 10,000 ft.
<b>MECHANICAL</b>	
Dimensions; 2.7" high x 2.69" wide x 1.5" deep	
Weight . . . . .	24 ounces (680 grams)
Cable length . . . . .	1.5 meters (5 ft)

6 months  
in factory  
0.01%

## Section 2

### Operating Instructions

#### 2-1. INTRODUCTION

2-2. This section contains information for the proper operation of the 80F-15. Refer to figure 2-1 for the following discussion. The 80F-15 high voltage probe is conservatively designed to operate safely at its rated voltage under normal conditions. However allowing for extenuating circumstances two considerations must always be of concern. These are: condition of the equipment, and capability of the operator.