

INTRODUCTION

The LT544D-20 and LT544D-20E Digital Safety Analyzers are portable instruments for the basic electrical safety evaluation of electrical medical devices. Their compact hand held size makes them an ideal addition to a service technician or engineer's tool box for that "after service test" as well as serving as a bench top instrument for the laboratory. They do not sacrifice functions or accuracy and their low cost permits putting one on each bench.

The analyzers are simple to use. A single master function switch directly labeled with the test to be performed leads the user through a complete measurement procedure. A single range meter for each measurement avoids potential erroneous readings.

The analyzers utilize simple, yet sophisticated electronics for true RMS measurement of current and voltage. Input impedance uses the AAMI ES1-1985 test load to compensate for high frequency components in the measurement. Resistance measurements are made with a four wire Kelvin bridge to eliminate errors due to cable length and input connector resistance.

KEY FEATURES:

- ☐ Hand held instrument
- ☐ Test power line integrity (LT544D-20 only)
- ☐ Line voltage
- ☐ Grounding resistance via Kelvin bridge
- ☐ Earth current
- ☐ Enclosure (chassis) current
- ☐ Forward and reverse polarity
- ☐ Open/closed neutral
- ☐ True RMS measurement
- ☐ AAMI Test Load

SPECIFICATIONS

LINE VOLTAGE

Range	Mains Voltage
Accuracy	$\pm 1 \%R, \pm 1$ digit
Resolution	1 Volt

GROUND RESISTANCE

Range	0-19.99 ohms
Accuracy	$\pm 1 \%R, \pm 1$ digits
Resolution	0.01 ohms
Type	4 wire Kelvin bridge
Current Source	10 mA DC

LEAKAGE CURRENT

Range	0-1999 μA RMS,
Accuracy	DC and 25 to 1.0 KHz, $\pm 1 \%R, \pm 1$ digit 1.0 KHz to 100 KHz, $\pm 2.5 \%R, \pm 1$ digit 100 KHz to 1 MHz, $\pm 5.0 \%R, \pm 1$ digit
Resolution	1 μA

INPUT IMPEDANCE	1000 Ω , AAMI ES1-1993 load
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CURRENT CAPACITY

LT544D-20	15 Amps at 120 volts
LT544D-20E	10 Amps at 230 volts

POWER CONSUMPTION

LT544D-20	< 0.1A, 100 to 135 V, 50/60 Hz
LT544D-20E	< 0.1A, 200 to 265 V, 50/60 Hz

ENVIRONMENTAL

Temperature	
Operating	15-40°C
Storage	20-65°C
Relative Humidity	90 % max

MECHANICAL

Dimensions	6.25" x 3.75" x 1.37" (159 mm x 95 mm x 35 mm)
Weight	1.5 lbs (0.7kg)