

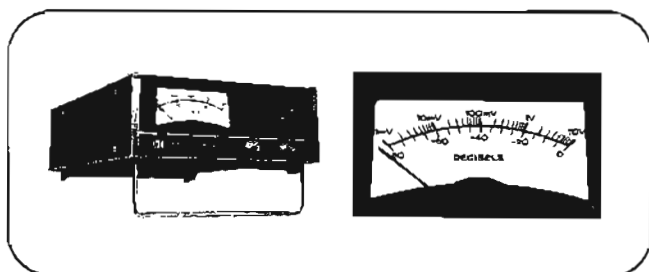
LOGARITHMIC VOLTMETERS

Convert ac or dc signals to logarithmic scaling
Models 7562A and 7563A



MEASURING DEVICES

Log Voltmeter/Converter Model 7562A



The Model 7562A is a wide range (80 dB), single channel logarithmic voltmeter/converter designed to produce dc output voltages in a logarithmic relationship to dc input voltages or the true RMS value of an ac input voltage. The 7562A contains a true RMS detector which, inherently, is not dependent on pure sinusoidal signals to achieve measurement accuracy. A self-contained meter calibrated in volts and dB makes the 7562A an accurate voltmeter. A constant amplitude oscilloscope output makes the converter compatible with a variety of oscilloscope readout and phase meter applications.

Specifications

Performance specifications

Ac and dc modes

Input:

Dynamic range: 80 dB.

Voltage range: 1 mV to 10 V or 10 mV to 100 V selectable by front panel switch. Accepts either ac or positive signals.

Output:

Voltage: 0 to 800 mV dc corresponding to 10 mV/dB.

Output impedance: 100 ohms.

Dc mode

Accuracy: ± 0.25 dB at 25°C.

Input impedance: 100 k Ω , shunted by less than 100 pF; single ended.

Temperature coefficient: ± 0.02 dB/°C maximum.

Zero stability: ± 0.25 dB.

Ac mode

Input impedance: 1 M Ω , shunted by less than 100 pF; single ended.

Accuracy and frequency response: (at 25°C).

RANGE SETTING	0.5Hz	2	5	20	50	200Hz	50KHz	100KHz
0.5Hz	± 1 dB					± 0.5 dB		± 1 dB
5Hz			± 1 dB			± 0.5 dB		± 1 dB
50Hz				± 1 dB		± 0.5 dB		± 1 dB

Temperature coefficient: ± 0.04 dB/°C maximum.

Slewing speed:

Range setting	Minimum slewing speed
0.5 Hz	1 dB/s
5 Hz	10 dB/s
50 Hz	60 dB/s

Oscilloscope output: approx. 0.5 V rms regardless of input.

Crest factor: 5:1 unless limited by max. input voltage.

General specifications

Maximum peak input voltage: ± 25 V on 1 mV to 10 V range;

± 250 V on 10 mV to 100 V range.

Operating temperature: 10°C to 40°C.

Warm-up time: 20 minutes nominal.

Connectors: front and rear-input and output-BNC connectors.

Power requirements: 115/230 Vac, 50 to 400 Hz, 40 VA.

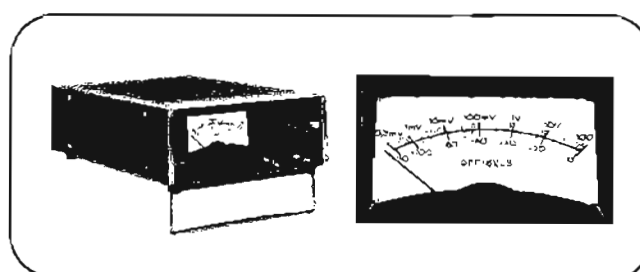
Dimensions: 3-7/16" high, 7-3/4" wide, 11-1/2" deep (88 x 197

x 292 mm).

Weight: net, 8 lb (3,6 kg); shipping, 12 lb (5,4 kg).

Price: Model 7562A \$1045.

Log Voltmeter/Amplifier Model 7563A



The Model 7563A Logarithmic Voltmeter/Amplifier is a low cost, single channel, dc logarithmic amplifier with a very high dynamic range (110 dB) designed to produce a logarithmic-related dc output voltage for a very wide range of dc input voltages. A single input range of 316 μ V to 100 V is coupled with an input polarity switch for ease and versatility of operation. A high (100 k Ω) input impedance and low (less than 5 Ω) output impedance allows the 7563A to be used in systems or on the bench. A front panel meter calibrated in dB and mV provides instantaneous visual indication of operating levels. Applications include: log scaling of recorder axes, pulse height analyzers, scope displays, and almost any circumstance where log compression of dc voltage ranges is required. The 7563A is an accurate voltmeter. Dual or single rack mounting capability is afforded by a field installable rack mounting adapter, utilizing a minimum of rack space.

Specifications

Performance specifications

Input

Dynamic range: 110 dB.

Voltage range: 316 μ V to 100 V. Accepts either positive or negative signals, selectable by front panel switch.

Output

Voltage: 0 to 1.1 V dc corresponding to 10 mV/db. Rear Terminals; adjustable 1 to 10 mV/db.

Output impedance: less than 5 Ω front panel, 300 Ω rear.

Meter accuracy: reading accurate to ± 1.5 dB, referred to output.

Input impedance: 100 k Ω , shunted by less than 100 pF; single ended.

Accuracy: (at 25°C).

316 μ V	1 mV	10 V	31.6 V	100 V
± 0.5 dB	± 0.25 dB	± 1.0 dB	± 1.5 dB	

Temperature coefficient: ± 0.02 dB/°C maximum and ± 3 μ V/°C referred to input.

Zero stability: ± 0.25 dB at constant temperature.

Rise time:

Maximum Rise Time	
Signal Level	1 mV-10 V Range
316 μ V- 1 mV	2000 μ s
1 mV- 10 mV	400 μ s
10 mV-100 mV	40 μ s
100 mV- 1 V	4 μ s
1V-100 V	2 μ s

General specifications

Operating temperature: 10°C to 40°C.

Warm-up time: 20 minutes nominal.

Connectors: front and rear-input and output-BNC connectors.

Power requirements: 115/230 V ac, 50 to 400 Hz, 40 VA.

Dimensions: 3-7/16" high, 7-3/4" wide, 11-1/2" deep (88 x 197

x 292 mm).

Weight: net, 8 lb (3,6 kg); shipping, 12 lb (5,4 kg).

Price: Model 7563A \$745.