



TYPE LP7

AF ATTENUATOR

d-c to 40 kc

RADIOMETER

72 EMDRUPVEJ, COPENHAGEN NV, DENMARK

DESCRIPTION

The type LP7 AF Attenuator is a high-accuracy instrument, which can produce attenuations from 0 to 125 dB. It is a popular laboratory instrument, which in conjunction with a low-frequency oscillator with calibrated output (for example the Radiometer types HO12 or HO32 Beat-Frequency Oscillators) can produce accurate voltages from 10 volts down to some microvolts.

As the Attenuator has a negligible frequency error it is also most useful for measuring the frequency response of amplifiers to which an output meter is connected only as a reference instrument, all level readings being made on the high-resolution attenuator dial.

The attenuation is set either in 5 steps of 20 dB or continuously by means of the dial which covers 25 dB. With unloaded output, the attenuation is directly read in dB, and with a 10 volt input level, the dials also indicate the output level directly in millivolts.

The schematic diagram shows the details of the construction. All resistors are 0.1% wire-wound resistors with low inductance and very high stability. The coaxial input and output permit the use of shielded cables which prevent undesired coupling between the high and low level external circuits.

SPECIAL FEATURES

- 0 to 125 dB attenuation, continuously adjustable.
- Accuracy of 0.3%.
- High resolution.
- Careful shielding.
- Direct calibration of dials in dB attenuation and in output voltage.

APPLICATIONS

- Accessory to oscillators for producing accurately known levels down to the microvolt region.
- Measurement of the frequency response of amplifiers in conjunction with an oscillator and a meter.

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SPECIFICATIONS

ATTENUATION RANGE

0 to 125 dB.

5 steps of 20 dB and continuously from 0 to 25 dB.

ACCURACY OF OUTPUT VOLTAGE

d-c: 0.3% for the step attenuator.

0.2% of full scale for the continuous dial.

Up to 40 kc, the additional error is below 1%, and up to 200 kc and 100 dB attenuation about 2%.

IMPEDANCES

Both input and output impedances are 600 ohms \pm 3% when the attenuation is greater than 20 dB.

MAXIMUM INPUT

The resistors will stand a maximum input of 20 volts rms.

TERMINALS

Both terminals are furnished with Radiometer standard 14 mm coaxial sockets, which also accommodate ordinary 4 mm banana plugs.



MOUNTING AND FINISH

Steel cabinet finished in grey enamel. A support bracket permits convenient operation with the attenuator in a slightly tilted position.

DIMENSIONS

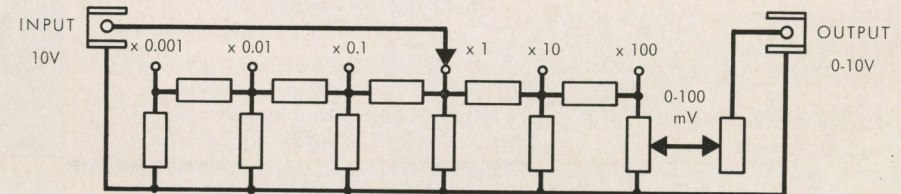
Height	Width	Depth
110	235	150 mm
4 1/4	9 1/4	6 inches

WEIGHT

2 kilos net (4.4 lbs.).

ACCESSORIES SUPPLIED

1 type 1B2 coaxial cable with Radiometer standard plugs, which fit into the sockets of the type LP7. One end has a ground strap with a 4 mm banana plug.



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Schematic diagram of the type LP7 AF Attenuator.

RADIOMETER

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