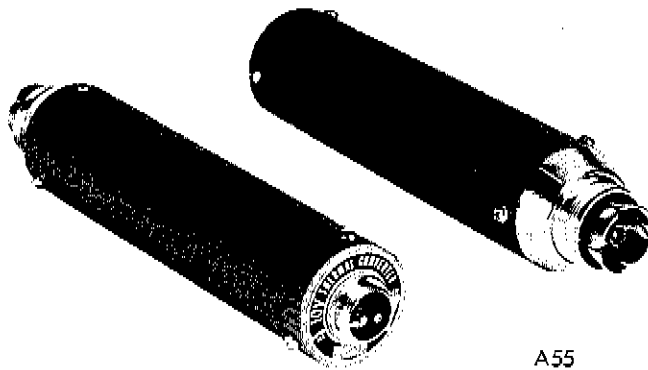


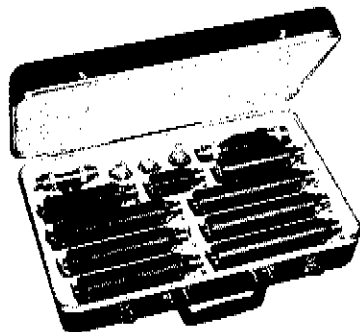
A55

FLUKE

# THERMAL CONVERTERS



A55



C55 CASE

Model A55 Thermal Converters make possible extremely accurate thermal-transfer AC measurements from subaudio frequencies to the VHF region. The design of the A55 series is comparable to that of standards maintained by the National Bureau of Standards.

A specially constructed thermocouple, selected for frequency characteristics and low DC reversal error, is the thermally responsive element of the A55 series. AC and DC input voltage are applied directly across the thermocouple heater on the 0.5 volt model. For higher voltages, low temperature coefficient metal-film resistors provide the proper division ratio.

The thermocouple, range resistors, and compensation components are compactly mounted on a printed circuit board, with good thermal isolation and mechanical rigidity.

## FEATURES

- Frequency Range 5 Hz - 50 MHz
- Excellent Thermal Characteristics
- Rugged Construction
- Compact Design

A55 converters can be used with the Model 540B Thermal Transfer Standard. The 540B contains an internal transfer circuit, high-resolution electronic galvanometer, reference supply, and search circuit; by itself it may be used over a frequency range from 5 Hz to 1 MHz. By connecting the A55 converter output to the jack provided, the internal transfer circuit of the 540B is bypassed so that only the null detector and reference supply are used.

## APPLICATIONS

- Laboratory standard
- Laboratory calibration of AC voltage sources and precise measurement of unknown AC voltages
- Production line testing and calibration of AC voltmeters, voltage sources and AC/DC transfer standards

Each A55 has a useful range from 1/2 to 1 times the rating of the converter, with the specified AC/DC difference applicable over this range.

To store the A55 converters and accessories, a Model C55 container with a molded polyurethane foam cushion insert is available. The C55 is designed to accommodate a complete set of nine converters and accessories.

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**Thank you for your cooperation, and for your interest in Fluke.**

**Sincerely,**

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RANGE: 0.5, 1, 2, 3, 5, 10, 20, 30, and 50 volts.  
(NOTE: Each converter may be used from 1/2 to 1 times voltage rating).

**ACCURACY OF CALIBRATION AND CERTIFICATION (% OF INPUT):**

1 MHz	- ±0.05%
10 MHz	- ±0.10%
20 MHz	- ±0.15%
30 MHz	- ±0.20%
50 MHz	- ±0.50%

Each converter is furnished (at no charge) with a John Fluke production test record listing the AC/DC difference characteristic at the above frequencies to the nearest ±0.01%, except at 50 MHz for the 20, 30, and 50 volt converters. The AC/DC difference is established by comparison to John Fluke standards that are periodically inter-compared to the standards of NBS.

Typical AC/DC differences are less than ±0.01% below 1 MHz, ±0.01% at 1 MHz, ±0.02% at 20 MHz, ±0.1% at 30 MHz, and ±0.3% at 50 MHz. (All calibration is referenced to center of 874-TL coaxial tee attached to converter input connector.)

John Fluke test reports to the nearest ±0.01% at varying frequencies and voltages are available at extra cost. A test fee schedule will be immediately forwarded upon request. For NBS test reports, price/delivery and other information should be requested directly from NBS.

**INPUT IMPEDANCE:** Approximately 200 ohms/volt.

**OUTPUT VOLTAGE:** 7 millivolts nominal at rated input.

**OUTPUT RESISTANCE:** 8 ohms nominal.

**REVERSAL ERROR:** Less than 0.025%.

**INPUT CONNECTOR:** GR type 874-L.

**OUTPUT CONNECTOR:** Amphenol 80-PC2M 2-pin, microphone type.

**SIZE AND WEIGHT:**

Converter	Diameter	Length	Weight
0.5V	1-3/8"	3-5/16"	10 oz.
1V, 2V	1-3/8"	5-3/16"	13 oz.
3V, 5V	1-3/8"	6-1/2"	15 oz.
10V, 20V			
30V, 50V	1-3/8"	7-1/16"	1 lb.

**PRICE:** 0.5V - \$125.00 ea.  
1V, 2V, 3V, or 5V - \$150.00 ea.  
10V, 20V, 30V, or 50V - \$175.00 ea.

Model C55 storage case \$75.00 All prices f. o. b. factory, Mountlake Terrace, Washington

**OPTIONAL ACCESSORY KIT:**

Model A55-110 Accessory Kit is recommended for use with Model A55 Thermal Converters in virtually any calibration or measurement setup. The kit includes:

- 1) Coaxial Tee for A55 Input (GR Type 874-TL).
- 2) Three Coaxial Adapters for A55 Input (GR Type 874 to UHF, BNC, and Type N jacks).
- 3) Interconnecting coaxial cable, AC source to coaxial tee.

**KIT PRICE:** \$75.00