

# Model DB877

RESISTANCE STANDARDS & INSTRUMENTS

- Resistance range 0.1  $\Omega$  through 12 M $\Omega$
- 0.1  $\Omega$  resolution
- 0.01% Initial Accuracy
- Serves DC through Audio Frequency Applications
- Great stability due to 5 ppm/°C Temperature Coefficient and 0.3 ppm/mW Power Coefficient for values 1 k $\Omega$  and up
- Short term switch repeatability  $\pm 1$  m $\Omega$  typical

## Dekabox Coaxial-Dial Decade Resistor

The Model DB877 Dekabox Decade Resistor provides dependable long-term service in precision DC through audio frequency applications. Eight decades of non-inductive, precision, wire-wound fixed resistors are mounted in a low noise shielded metal case that also provides good mechanical protection.

The DB877 is easy to use. It has the input terminals and a case-connected ground terminal conveniently located on the front panel. The dials rotate independently through 360 degrees of rotation and a special detent design facilitates dial location. This allows for a coarse approximation and then precise finer steps to provide an exact resistance value.

Accuracy over a wide range of ambient conditions is assured by the use of resistors with good temperature and power coefficients. Repeatability is assured by the use of switches that have multiple contacts of solid silver-alloy and silicone treated ceramic wafers.

Resistance per step and current ratings on each decade are presented below the dials for operator convenience and circuit safety.



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# Model DB877

DEKABOX COAXIAL-DIAL DECADE RESISTOR

## Specifications

### Accuracy

Initial  $\pm(0.01\% + 7m\Omega)$ .

Long-term  $\pm(0.02\% + 10m\Omega)$ .

### Resistance at Zero Setting

Approximately 40 m $\Omega$ .

### Breakdown Voltage

1000 V peak to case.

### Short-Term Switching Repeatability

$\pm 1 m\Omega$  (typical).

### Smallest Step

0.1  $\Omega$ .

### Number of Decades

Eight.

### Total Resistance

12 M $\Omega$ .

### Resistance per Decade

See table.

### Dimensions

Height 5.9 in. (15.0 cm).

Width 8.5 in. (21.6 cm).

Depth 6.5 in. (16.5 cm).

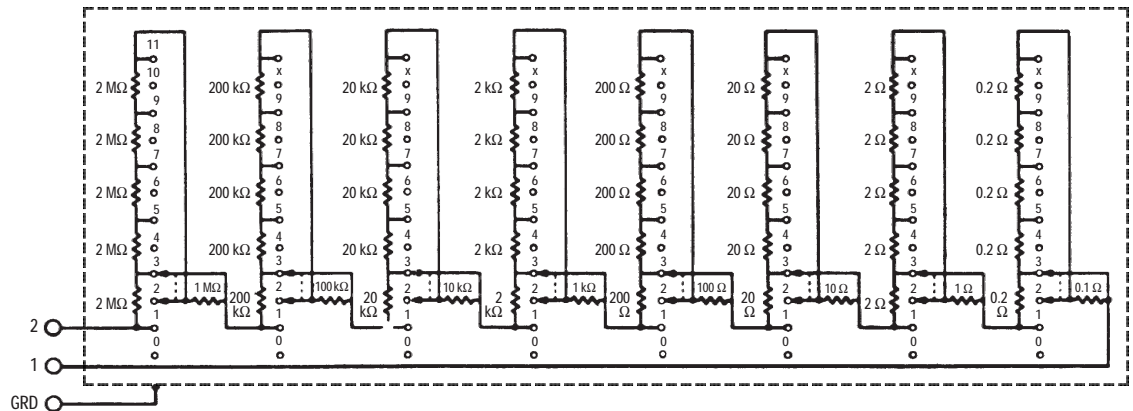
### Weight

7.5 lb. (3.4 kg) net.

## Model DB877 ratings per step for each decade

Resistance Per Decade ( $\Omega$ )	Smallest Step ( $\Omega$ )	Incremental Accuracy		Coefficients		Measurement Duty* Maximum Ratings		Peak Voltage (V/step)
		Initial (%)	Long-term (%)	Temperature (ppm/ $^{\circ}$ C)	Power (ppm/mW/step)	Power (mW/step)	Current (mA)	
10M	1M	0.02	0.03	5	0.3	22	0.03	300
1M	100k	0.02	0.03	5	0.3	220	1.5	150
100k	10k	0.02	0.03	5	0.3	500	7	70
10k	1k	0.02	0.03	5	0.3	500	23	23
1k	100	0.02	0.03	5	0.3	500	71	7
100	10	0.03	0.03	15	0.9	500	230	2.3
10	1	0.1	0.12	20	1.2	500	710	0.7
1	0.1	1.0	1.0	60	6	250	1600	1.6

\*Intermittent use such that temperature rise of the resistor will not appreciably exceed that which would occur in free air.



## Standard Equipment

Model DB877 comes with a 19199 instruction manual.

## Calibration & Technical Services

For warranty and remedial repair, calibration services and spare parts, or for additional information on TEGAM sales and service offices around the world, contact us at 440-466-6100 (ph) or 440-466-6110 (fx).



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TEN TEGAM WAY • GENEVA, OHIO 44041  
440-466-6100 • FAX 440-466-6110  
www.tegam.com • e-mail: sales@tegam.com