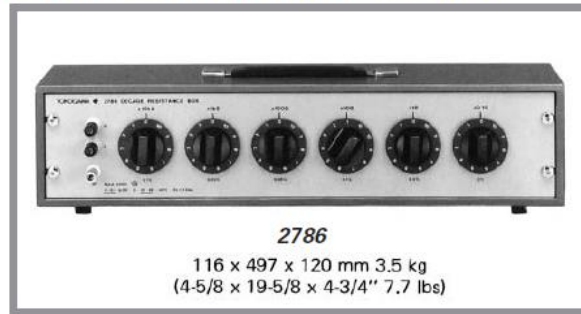


# 2786 Decade Resistance Boxes



Models 278610 and 278620 six-dial decade resistance boxes allow quick and easy setting of a wide range of resistance. These resistance boxes are used in combination with voltage or current standards to adjust voltage or current, as dummy load resistances or as an arm of AC bridges.

## SPECIFICATIONS

### Available Models:

Model Number	Resistance Range
278610	0.1 to 111,111 $\Omega$ (six decade dials)
278620	1 to 1,111,110 $\Omega$ (six decade dials)

**Residual Resistance:** Less than 23m $\Omega$ .

**Power Rating:** 0.3W/step, within 3W for overall instrument.

**Maximum Allowable Input:** 0.5W/step, 5W for overall instrument.

**Maximum Circuit Voltage:** 250V.

**Operating Temperature Range:** 0 to 40°C (32 to 104°F).

**Storage Temperature Range:** -10 to 50°C (14 to 122°F).

**Humidity Range:** 25 to 85%, relative humidity.

**Insulation Resistance:** More than 500M $\Omega$  at 500V DC.

**Dielectric Strength:** 1,500V AC for one minute.

### Accuracy and Temperature Coefficient (2786):

Step	Accuracy <sup>*1</sup>	Temperature Coefficient <sup>*2</sup>		Reference Data	
		$\alpha_{23}$ ( $\times 10^{-6} / ^\circ\text{C}$ )	$\beta$ ( $\times 10^{-6} / ^\circ\text{C}^2$ )	Current Rating	Max. Allowable Input Current <sup>*3</sup>
0.1 $\Omega$	$\pm 2$	$\pm 250$	-0.4 to -0.8	1.7A	2.2A
1 $\Omega$	$\pm 0.5$	$\pm 100$	-0.4 to -0.8	550mA	710mA
10 $\Omega$	$\pm 0.1$	$\pm 20$	-0.4 to -0.8	170mA	220mA
100 $\Omega$	$\pm 0.05$	$\pm 10$	-0.4 to -0.8	55mA	71mA
1k $\Omega$	$\pm 0.05$	$\pm 10$	-0.4 to -0.8	17mA	22mA
10k $\Omega$	$\pm 0.1$	$\pm 50$	$\pm 0.1$	5.5mA	7.1mA (10k $\Omega$ to 30k $\Omega$ ) 250V (40k $\Omega$ to 100k $\Omega$ )
100k $\Omega$	$\pm 0.1$	$\pm 50$	$\pm 0.1$	250V (200k $\Omega$ to 1M $\Omega$ ) 1.7mA (100k $\Omega$ )	250V

Notes:

\*1. At standard reference conditions of 23 $\pm$ 3°C ambient temperature, 45 to 75% humidity and less than 0.1W application.

\*2. The resistance value at t°C can be expressed by the following equation:

$$R_t = R_{23} [1 + \alpha_{23} (t - 23) + \beta (t - 23)^2]$$

Where,  $R_t$  : Resistance value at t°C.

$R_{23}$  : Resistance value at 23°C.

\*3. Within five minutes.