

# PRECISION MEASURING INSTRUMENTS

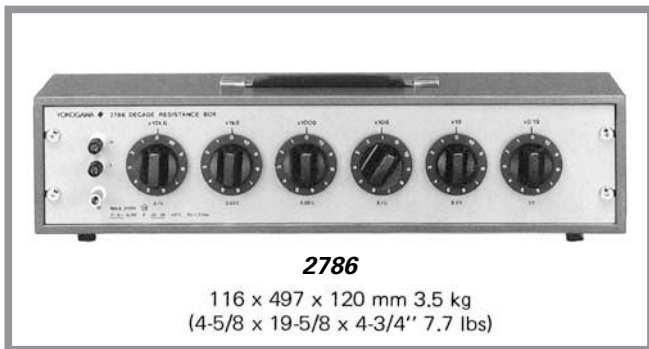
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# SELECTOR GUIDE FOR PRECISION MEASUREING INSTRUMENTS

Classification	Model Number	Measuring Range (Accuracy)												Page	
		0.1	1	10	100μV										
Galvanometer	2707														3
	2708														
		0.1	1	10	100mΩ	1	10	100Ω	1	10	100kΩ	1	10	100MΩ	
Wheatstone bridge	2768														4
	2755														5
Double bridge	2752														6
	2769														5
Standard resistor	2792A														7
Variable resistor	279301														9
	279303														
	278610														10
	278620														

# 2786 Decade Resistance Boxes



## SPECIFICATIONS

### Available Models:

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

**Residual Resistance:** Less than 23mΩ.

**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 500MΩ at 500V DC.

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

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.

### Accuracy and Temperature Coefficient (2786):

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

#### Notes:

\*1. At standard reference conditions of 23±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.

#### NOTICE

- Before using the product, read the instruction manual carefully to ensure proper and safe operation

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