2786
Decade Resistance Boxes

2786

116 x 497 x 120 mm 3.5 kg
(4-5/8 x 19-5/8 x 4-3/4" 7.7 lbs)

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 111,111Ω (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.

Accuracy and Temperature Coefficient (2786):

Step	Accuracy *1	Temperature Coefficient *2		Reference Data	
		α_{23} (x 10^{-6}/°C)	β (x 10^{-6} /°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, Rt : Resistance value at t°C.
R_{23} : Resistance value at 23°C.

*3. Within five minutes.

2791
Slide Resistors

2791

125 x 510 x 85 mm 2.7 kg
(5 x 20-1/8 x 3-3/8" 6 lbs)

Model 2791 is composed of resistance wire with an insulating coating wound on a frame of special ceramic and a sliding brush that maintains contact with the wire. Resistance is continuously variable and can be increased or decreased as desired.

The device permits current and voltage to be accurately adjusted without disconnecting the circuit. The resistor is widely used in testing laboratories and also in industrial tests and inspection of machinery and equipment.

SPECIFICATIONS

Available Models:

Code	Nominal Value	Allowable Input Current
279101	4,800 Ω	0.18 A
279102	1,400 Ω	0.35 A
279103	600 Ω	0.5 A
279105	170 Ω	1.0 A
279108	39 Ω	2.0 A
279110	10 Ω	4.0 A
279112	4.7 Ω	6.0 A

Allowable Deviation: ±20% of nominal value.
Insulation Resistance: More than 5MΩ at 500V DC between terminal and case.
Dielectric Strength: 1,000V AC for one minute between terminal and case.