

Dekabox In-Line Decade Resistors

DB62 Series

The DB62 Series offers a dependable, long-term service in precision dc through audio frequency applications. The units feature 6 decades with non-inductive, precision resistors mounted in a low-noise, shielded housing. After inheriting the DB62 series from esi, IET used its own resistance technology to significantly improve the stability of the unit.



Sample DB62 Decade Resistor

Features:

- Four available models
- High accuracy: $\pm(0.01\% + 2 \text{ m}\Omega)$
- Serves DC through audio frequency applications
- Improved stability: $\pm 20 \text{ ppm/year}$
- Low TC: $\pm 5 \text{ ppm}/^\circ\text{C}$

SPECIFICATIONS

Resistance per step	Total decade resistance	Max current	Max voltage (per step)	Max power (per step)	Stability ($\pm\text{ppm/yr}$)	Long-term stability ($\pm\text{ppm/3 yrs}$)	Temperature coefficient ($\pm\text{ppm}/^\circ\text{C}$)	Resistor type
10 m Ω	100 m Ω	4.0 A	40 mV	0.16 W	50	75	20	Resistance wire
100 m Ω	1 Ω	1.6 A	0.16 V	0.25 W	50	75	20	
1 Ω	10 Ω	0.8 A	0.8 V	0.6 W	20	25	20	
10 Ω	100 Ω	0.25 A	2.5 V	0.6 W	20	25	15	Wirewound, non-inductive
100 Ω	1 k Ω	80 mA	8 V	0.6 W	20	25	5	
1 k Ω	10 k Ω	23 mA	23 V	0.5 W	20	25	5	
10 k Ω	100 k Ω	7 mA	70 V	0.5 W	20	25	5	
100 k Ω	1 M Ω	2.3 mA*	230 V*	0.5 W*	20	25	5	
1 M Ω	10 M Ω	0.7 mA*	700 V*	0.5 W*	20	25	10	

*Subject to maximum of 2000 V to case

Accuracy:

$\pm(0.01\% + 2 \text{ m}\Omega)$
after subtraction of zero resistance, at 23°C;
traceable to SI

Zero resistance:

<1 m Ω per decade at dc

Max voltage to case:

2000 V peak

Terminals:

Gold-plated, 5-way, tellurium-copper binding posts with low thermal emf and low resistance. Rear outputs are available as an option.

Environmental conditions:

Operating: 10°C to 40°C; <50% RH
Storage: -40°C to 70°C

Switches:

Six decades
Continuous rotation
11 positions marked "0"-"10"
Multiple solid silver-alloy contacts

Mechanical:

Dimensions: 43.9 cm W x 8.9 cm H x 10.2 cm D
(17.3" x 3.5" x 4")
Weight: 2.4 kg (5.3 lb)

ORDERING INFORMATION

DB62-11K	Dekabox, 6-decade, 11.111 k Ω , 0.01 Ω per step
DB62-111K	Dekabox, 6-decade, 111.111 k Ω , 0.1 Ω per step
DB62-1M	Dekabox, 6-decade, 1.11111 M Ω , 1 Ω per step
DB62-11M	Dekabox, 6-decade, 11.1111 M Ω , 10 Ω per step