



## 1040 Decade Resistance Box

- 1Ω – 100 MΩ
- High accuracy and precision
- Clear visual indication
- High stability and low temperature coefficient
- Compact and robust.



### Introduction

The 1040 is a compact, robust and accurate decade resistance box designed to meet the needs of both industry and education. Housed in a robust metal case, the compact construction makes it easily portable. When in use in the laboratory, it takes up a minimum of bench space.

The high accuracy of the 1040 is achieved by means of high stability metal film resistors. Accuracy at low settings is determined by the switch contact resistance which has been kept to a minimum. Mid-scale accuracy is 0.1% or better. The thumbwheel switch selection of output resistance enables precise setting with a clear unambiguous indication.

Metal film resistors are used to obtain the high stability and low temperature coefficient. The temperature coefficient is typically better than 50 ppm per degC. Each resistor has a power rating of 1 watt.

It is imperative that the switch setting should be unambiguous in order to avoid misreading the set value. The possibility of misreading increases considerably as the number of digits is increased. To prevent misreading, the 1040 incorporates a unique colour coding system to divide the setting into 3 groups corresponding to ohms, kilohms, and megohms. This feature makes the 1040 ideal for educational applications.

Special attention has been given to the problem of reliability of operation. A special multiple gold contact switch arrangement ensures that a back-up contact is always available to take over should a failure occur.

### Specification

**Resistance Range:** 1Ω to 100MΩ in 1Ω steps

ACCURACY								
Decade	1 - 9 ohm	10 - 90 ohm	100 - 900 ohm	1 - 9 Kohm	10 - 90 Kohm	100 - 900 Kohm	1 - 9 Mohm	10 - 90 Mohm
Accuracy %	± 1	± 0.5	± 0.1	± 0.1	± 0.1	± 0.1	± 0.1	± 1
Max Current	0.5 A	0.3 A	100 mA	30 mA	3 mA	0.3 mA	30 uA	3 uA

**Power Rating :** 1 watt per resistor. Metal film resistors

**Voltage Rating:** Max 300V

**Zero Residual:** Less than 250 milliohms

**Temp Coeff:** Less than 50 ppm per °C

**Connections:** 4 mm terminals. A third terminal is connected to the metal case and can be used for screening

**Construction.** The case is robust metal construction.

**Dimensions:** 110 x 75 x 200 mm, 0.6kg

**Optional Extras:** Carrying Case

### Ordering Information

Description	Order Code
Decade Resistance Box 1040	1040
Carrying Case	9026
N.P.L. Traceable Calibration Certificate	9161
UKAS Calibration Certificate	9114

