



Time Electronics
Calibration, Test and Measurement

Decade Boxes

Resistance • Capacitance • Inductance



Decade Boxes

Resistance, Capacitance, and Inductance



1051 – 8 Decade Low Ohm Resistance Box

Range / Resolution: 0 to 1MΩ / 0.01Ω steps

Decade	0.01Ω	0.1Ω	1Ω	10Ω	100Ω	1kΩ	10kΩ	100kΩ
Accuracy	± 10%	± 5%	± 1%	± 0.5%	± 0.1%	± 0.1%	± 0.1%	± 0.1%
Max Current	1A	1A	1A	0.3A	0.1A	33mA	10mA	3mA

Residual Resistance: Less than 90mΩ

Power Rating: 1 watt per resistor

Voltage Rating: Maximum 250V DC/AC RMS

Temperature Coefficient: 50ppm/°C

Dimensions / Weight: w215 x H100 x D120mm / 1kg (incl. protective boot)

Features: Colour coded digits, safety terminals, and protective rubber boot



1040 – 8 Decade Wide Range Resistance Box

Range / Resolution: 0 to 100MΩ / 1Ω steps

Decade	1Ω	10Ω	100Ω	1kΩ	10kΩ	100kΩ	1MΩ	10MΩ
Accuracy	± 1%	± 0.5%	± 0.1%	± 0.1%	± 0.1%	± 0.1%	± 0.1%	± 1%
Max Current	0.5A	0.3A	100mA	30mA	3mA	0.3mA	30μA	3μA

Residual Resistance: Less than 250mΩ

Power Rating: 1 watt per resistor

Voltage Rating: Maximum 250V DC/AC RMS

Temperature Coefficient: 50ppm/°C

Dimensions / Weight: w215 x H100 x D120mm / 1kg (incl. protective boot)

Features: Colour coded digits, safety terminals, and protective rubber boot



1041 – 5 Decade Low Ohm Resistance Box

Range / Resolution: 0 to 1kΩ / 0.01Ω steps

Decade	0.01Ω	0.1Ω	1Ω	10Ω	100Ω
Accuracy	± 10%	± 5%	± 1%	± 0.5%	± 0.1%
Max Current	1A	1A	1A	0.3A	0.1A

Residual Resistance: Less than 60mΩ

Power Rating: 1 watt per resistor

Voltage Rating: Maximum 100V DC/AC RMS

Temperature Coefficient: 50ppm/°C

Dimensions / Weight: w215 x H100 x D120mm / 1kg (incl. protective boot)

Features: Colour coded digits, safety terminals, and protective rubber boot



1061 – 6 Decade Resistance Box

Range / Resolution: 0 to 1.2MΩ / 1Ω steps

Accuracy: ± 1%

Residual Resistance: Less than 150mΩ

Power Rating: 0.75 watt per resistor

Voltage Rating: Maximum 300V DC/AC RMS

Dimensions / Weight: w355 x H63 x D82mm / 0.75kg

Features: Slim line design and front panel safety terminals



1067 – 6 Decade Precision Resistance Box

Range / Resolution: 0 to 12k Ω / 10m Ω steps
 Accuracy: \pm 0.01%
 Residual Resistance: Less than 10m Ω . Less than 1m Ω variation
 Power Rating: 0.35 watt per resistor
 Stability: 20ppm/year (>1 Ω), 100ppm/year (<1 Ω)
 Voltage Rating: Maximum 200V DC/AC RMS
 Insulation: Case to resistance terminals 2kV / 50Hz maximum
 Temperature Coefficient: 10ppm/ $^{\circ}$ C (20ppm/ $^{\circ}$ C below 1 Ω)
 Dimensions / Weight: w355 x H63 x D89mm / 1.1kg
 Contacts: Make before break – silver alloy



1065 – 6 Decade Power Resistance Box

Range / Resolution: 0 to 120k Ω / 0.1 Ω steps
 Accuracy: \pm 5% (0.1 Ω), \pm 1% (1 Ω to 120k Ω)
 Residual Resistance: Less than 20m Ω
 Power Rating: 10 watt per resistor
 Voltage Rating: Maximum 500V DC/AC RMS
 Temperature Coefficient: 200ppm/ $^{\circ}$ C
 Dimensions / Weight: w390 x H80 x D150mm / 2kg
 Features: Ventilated robust metal case and multi-wafer switches for low switch contact resistance



1070 – 7 Decade Capacitance Box

1071 – 7 Decade Capacitance Box

1070 Range / Resolution: 0 to 10 μ F / 100pF steps
 1070 Residual Capacitance: Less than 38pF
 1071 Range / Resolution: 0 to 100 μ F / 10pF steps
 1071 Residual Capacitance: Less than 50pF
 Accuracy: 1% (5% above 10 μ F – 1071)
 Voltage Rating: Maximum 300V DC, 200V AC
 Dimensions / Weight: w215 x H100 x D120mm / 1kg (incl. protective boot)
 Features: Bi-polar working, colour coded digits, safety terminals, and protective rubber boot



1053 – 4 Decade Inductance Box

Range / Resolution: 0 to 10H / 1mH steps
 Accuracy at 1kHz: 3% of setting
 Voltage Rating: Maximum 30V AC
 Maximum Current: 150mA
 Residual Resistance: Less than 0.2 Ω
 Residual Inductance: Less than 1 μ H
 Dimensions / Weight: w248 x H62 x D102mm / 0.8kg
 Features: Robust metal case and front panel safety terminals





Time Electronics

Decade Boxes Ordering Information

1040	RESISTANCE BOX (1Ω to 100MΩ)
9026.....	Carrying Case
9028.....	Protective Rubber Boot (unit supplied with this as standard)
C161.....	Factory Calibration Certificate (NPL traceable)
C114.....	UKAS Calibration Certificate (ISO 17025)
1041	RESISTANCE BOX LOW OHM (0.01Ω to 1kΩ)
9026.....	Carrying Case
9028.....	Protective Rubber Boot (unit supplied with this as standard)
C161.....	Factory Calibration Certificate (NPL traceable)
C114.....	UKAS Calibration Certificate (ISO 17025)
1049	PT100 SIMULATOR HANDHELD (CLASS A $^{\circ}$C)
C161.....	Factory Calibration Certificate (NPL traceable)
C114.....	UKAS Calibration Certificate (ISO 17025)
1050	PT100 SIMULATOR HANDHELD (CLASS A $^{\circ}$F)
C161.....	Factory Calibration Certificate (NPL traceable)
C114.....	UKAS Calibration Certificate (ISO 17025)
1051	RESISTANCE BOX LOW OHM (0.01Ω to 1MΩ)
9026.....	Carrying Case
9028.....	Protective Rubber Boot (unit supplied with this as standard)
C161.....	Factory Calibration Certificate (NPL traceable)
C114.....	UKAS Calibration Certificate (ISO 17025)
1061	RESISTANCE BOX LOW COST (1Ω to 1.2MΩ)
C161.....	Factory Calibration Certificate (NPL traceable)
C114.....	UKAS Calibration Certificate (ISO 17025)
1065	RESISTANCE BOX - POWER 10W (0.1Ω to 100kΩ)
C161.....	Factory Calibration Certificate (NPL traceable)
C114.....	UKAS Calibration Certificate (ISO 17025)
1067	RESISTANCE BOX PRECISION LOW OHM (10mΩ to 10kΩ)
C161.....	Factory Calibration Certificate (NPL traceable)
C114.....	UKAS Calibration Certificate (ISO 17025)
1068	PRECISION FIXED RESISTANCE BOX (1Ω to 10kΩ)
C164.....	Factory Calibration Certificate (NPL traceable)
C141.....	UKAS Calibration Certificate (ISO 17025)
5069	INSULATION TESTER CALIBRATOR (decade resistance 100kΩ to 100GΩ)
C189.....	Factory Calibration Certificate (NPL traceable)
C112.....	UKAS Calibration Certificate (ISO 17025)
1070	CAPACITANCE BOX (100pF to 10μF)
9026.....	Carrying Case
9028.....	Protective Rubber Boot (unit supplied with this as standard)
C161.....	Factory Calibration Certificate (NPL traceable)
C114.....	UKAS Calibration Certificate (ISO 17025)
1071	CAPACITANCE BOX (10pF to 100μF)
9026.....	Carrying Case
9028.....	Protective Rubber Boot (unit supplied with this as standard)
C161.....	Factory Calibration Certificate (NPL traceable)
C114.....	UKAS Calibration Certificate (ISO 17025)
1053	INDUCTANCE BOX (1mH to 10H)
C170.....	Factory Calibration Certificate (NPL traceable)
C114.....	UKAS Calibration Certificate (ISO 17025)

Time Electronics Ltd., Unit 11 Sovereign Way,
Botany Industrial Estate, Tonbridge, Kent, TN9 1RH. United Kingdom.

T: +44 (0) 1732 355993 F: +44 (0) 1732 770312 E: mail@timeelectronics.co.uk

www.timeelectronics.com