



6652A HIGH RESISTANCE METER



Overview

After years of development of high resistance bridge measurement systems and resistance standards, Measurements International (MI) is pleased to announce the launch of the 6652A High Resistance Meter, available in two configurations: Base and Premium.

The 6652A offers users flexible operation in a simple, easy-to-use “meter-like” package.

The model 6652A High Resistance Meter is designed to measure high resistance in the range of 1 MΩ to 100 TΩ. The simplified construction and operation offer a more user-friendly approach to high resistance measurements, and to improve measurement speed over other single-input devices.

Direct Measurement Mode: In this mode, the 6652A offers users the ability to quickly establish nominal values of resistances, measure insulation resistance and volume, and surface resistivity. This mode is also useful for determining the resistor’s time constant, as well as

Featuring

- ▶ 1 MΩ to 100 TΩ
- ▶ Direct or Substitution Measurements
- ▶ Automatic and Manual Operation
- ▶ No Temperature Coefficient
- ▶ Multiple Modes of Operation
- ▶ Variable 1 V_{dc} to 1000 V_{dc}
- ▶ 6.5 Digits of Resolution
- ▶ Compatible with Model 4610 and 4620 High Resistance Scanners

voltage and temperature coefficients.

Resistor Substitution Measurements: (Only available for 6652A Premium) In this mode, high accuracy is obtained. The measurement of a standard of a known resistor is automatically compared to a resistor under test. With this method, any hardware drift and instability are taken into account and consequently are corrected for the unknown resistance measurement.

Voltage Range: The voltage range of the 6652A Basic is variable from 1 V_{dc} to 1000 V_{dc}. The voltage setting is indicated on the front panel display.

Operation: The front panel offers users simple and intuitive measurement options. Features include resistor protection, voltage setting, settle time of the resistor, number of measurements, the number of statistics and graphing.



The model 4610A (10) and 4620A (20) were developed to allow the 6652A to automate the process of measuring multiple high-value resistors such as the model 9331G.



Feature	Benefit
Multi-Information Display.	Indicates measurement parameters and data.
Wide Voltage Range.	Allows selection of appropriate measurement stimulus.
Variable Voltage.	Any voltage available from 1 V _{dc} to 1000 V _{dc} .
Multiple Measurement Modes.	Allows flexibility to match your needed uncertainty.
MI Designed and Proven.	Accuracy, and reliability you expect.



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Specifications: Rev 6

Applied V	Range (V)	100 T	10 T	1 T	100 G	10 G	1 G	100 M	10 M	1 M
500	1000									
100	499									
50	99									
10	49									
5	9.9									
2	4.95									
1	1.99									
Direct Reading Spec. with Applied Voltage > 5 V		3500	2000	1000	800	500	250	150	150	150
Ratio ¹ Spec 1:1		1500	750	300	100	70	70	50	50	50
Ratio ¹ Spec 1:10		3000	1500	500	250	170	170	150	150	-
Ratio ¹ Spec 1:100		3000	1500	500	250	170	170	150	-	-
Stability ³		< 1000	< 500	< 100	< 50	< 50	< 50	< 50	< 50	< 50
Temp Coeff. (ppm/°C) ²		< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10
		x 10⁻⁶								

¹ valid only for 6652A-Premium

² Temperature range 18 °C to 30 °C

Spec 2 x Spec 5 x Spec 10 x Spec

Caution: Do not exceed resistor specifications with respect to voltage, current or power

	Accuracy (x 10 ⁻⁶)	Stability ³ (x 10 ⁻⁶)	Resolution
Voltage Source	1000	30	6 Digit
Voltage Measurement	50	30	6 Digit
Current Range	10 µA to 10 pA		
Uncertainty (1 Year)	± 0.015 % of rdg (at 10 µA) to ± 0.35 % of rdg (10 pA)		

³ 5-hour short term stability at 23 °C ± 5 °C

Dimensions (L × W × H):
483 x 565 x 178 (mm)

Weight:
12 kg

Shipping Weight:
17 kg

Mains Power:
100 V_{ac} to 240 V_{ac}, 50/60 Hz
100 VA max.

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