



4610A HIGH RESISTANCE MATRIX SCANNERS



Featuring

- ▶ 10 Two-Terminal Channels
- ▶ N-Type Connections
- ▶ Front Panel or Remote Operation
- ▶ Maximum 1000 V Peak
- ▶ Resistance Measurements to 10 PΩ
- ▶ Insulation Resistance > 10¹⁶ Ω

Overview

The Model 4610A is a precision 10-channel coaxial matrix scanner designed specifically for ultra-high resistance measurements. Engineered from the ground up with complete focus on the sample path, it eliminates the limitations of conventional relay-based designs.

A fully coaxial signal path from input to output minimizes leakage currents and parasitic effects, enabling accurate measurements up to 1 TΩ with negligible uncertainty contribution. This ensures reliable, metrology-grade performance in demanding laboratory environments where stability and repeatability are critical.

The 4610A improves measurement efficiency by eliminating manual lead changes when testing multiple resistors, significantly reducing setup time and operator error. Channels can be selected via the front panel or remotely through the IEEE-488 (GPIB) interface for seamless system integration.

When used with Measurement International's 6000B Automated Resistance Bridge and

6600A High Resistance Dual Source Bridge, the system supports fully automated measurements, including unattended operation, scheduled testing, and improved laboratory throughput.

High-isolation N-type connectors and fully floating channels ensure optimal measurement integrity. Front panel LED indicators provide clear channel selection status, while an integrated protection feature prevents simultaneous connection of a single input to multiple outputs, safeguarding both the device under test and measurement system.

The robust mechanical design and precision switching architecture ensure long-term reliability and consistent performance, even in continuous operation environments. This makes the 4610A an ideal solution for national metrology institutes, calibration laboratories, and high-precision manufacturing facilities requiring repeatable, high-confidence resistance measurements.

Feature	Benefit
Coaxial Relays	Improve shielding to keep the noise down.
High Insulation Resistance	Provides extremely low error contribution.
MI Compatible	It can be used with MI software.
N-Type Connectors	Provide excellent isolation.



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Specifications: Rev 0

Operation	Two Terminal Coaxial Matrix
Resistance Measurement	Error Contribution
1 MΩ to 100 GΩ	< 1 x 10 ⁶
1 TΩ	< 5 x 10 ⁶
10 TΩ	< 50 x 10 ⁶
100 TΩ	< 500 x 10 ⁶
1 PΩ	< 5000 x 10 ⁶
10 PΩ	< 5 %
Max Carrying Current	1 A (AC/DC)
Maximum Voltage	1000 V (Peak)
Contact Resistance	< 0.5 Ω
Expected Relay Life	10 ⁷ Operations
Insulation Resistance	> 10 ¹⁶ Ω
4610A (10 Ch.) - Input/Output Connections	N-Type
Manual/GPIB	Both
Operating Environment	18 °C to 34 °C, 10 % to 80 % RH
Warranty	1 Year Parts & Labour

How to Order:

1. Model 4610A

Cables:

1. 9331G-01 N-Male to GR
2. 9331G-02 N-Male to N-Male
3. 9331G-03 N-Male to BNC
4. 9331G-XX N-Male to Special

Dimensions (L × W × H):

4610A - 133 x 450 x 380 (mm)

Weight:

10 kg

Shipping Weight:

14 kg

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