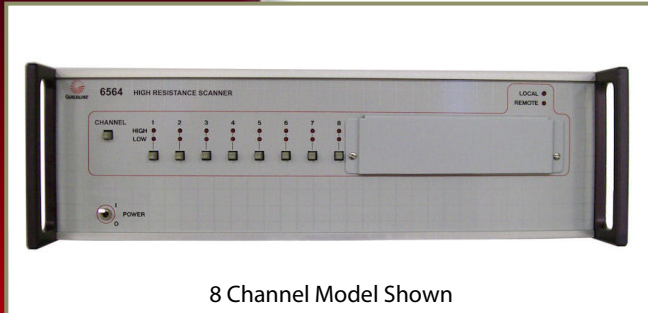


Model 6564 Series

8 AND 16-CHANNEL HIGH TO ULTRA-HIGH RESISTANCE SCANNERS

First Commercially Available High to Ultra High Resistance Scanner



8 Channel Model Shown

6564 SERIES FEATURES

- ◆ Withstands up to 1000 Vdc Providing Fully Automated Resistance Measurements
- ◆ Measurements from 100k to 10PΩ with No Guarding Required
- ◆ Fully Automates 6520 Short Transfer Measurements
- ◆ Very Low Leakage which can be Easily Characterized
- ◆ Thermoelectric Potentials: <20 nV
- ◆ Contact Life: >10,000,000 Cycles
- ◆ Front Panel or Remote GPIB Control
- ◆ 2 Terminal Switching Matrix, 8 or 16 Channels
- ◆ 8 Channel is Upgradeable to 16 Channels
- ◆ Gold Flashed Tellurium Copper Terminals
- ◆ Front Panel Indication of Selected Channels

Guildline's 6564 High to Ultra-High Resistance Scanners are the first commercial scanners capable of operating with measurement capabilities to 10 PΩ's (10^{15}) and at voltages to 1000 Vdc. This capability has never previously been commercially available, and will greatly improve the measurement and calibration throughput of high and ultra-high ohm resistors now that standard laboratories can easily and quickly automate a single or multiple resistance values.

Use of the 6564 Scanners makes no material contribution towards uncertainty based on noise or repeatability. As an example, this means using the scanner has no measured effect on Guildline's 6520 Teraohmmeter Transfer measurement mode of operation throughout the entire range of the meter.

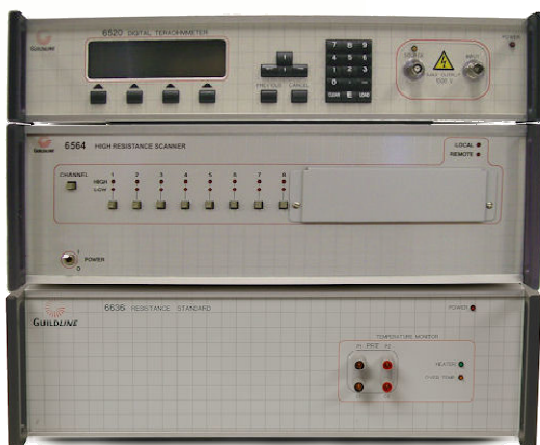
Contributing less than 1 ppm of Leakage for measurements at 100 GΩ and lower, the 6564 scanner has negligible effect on the uncertainty contribution when used for direct reading measurements considering the uncertainty budgets of measurements at these values. Furthermore, due to the repeatability of the scanner's leakage, this leakage is easily characterized and can be removed by specifying the offset. A complete table of the error contribution due to leakage of the 6564 Scanner is provided on page 2 of this datasheet.

The 6564 Series Scanners Provides >100¹⁵ Typical Isolation, Measurements to 10 PΩ and with Voltages Up to 1000 V with No Guarding Required! True Automation Capability for High to Ultra-High Value Resistance is Now Available for Everyone!

High and Ultra-High ohm resistance measurements are typically difficult to make and are very time consuming because of the low signal/noise ratio. With the Guildline model 6564 Scanners and software, these hard-to-make high ohm measurements (up to 10 PΩ) can now be automated and scheduled at any time that is convenient to the metrologists, even at night and over the weekends, when the lab is empty and quiet.

8-channel and 16-channel models are available. Like other Guildline products, the 8-channel scanner can be expanded to a 16-channel model, giving our customers exactly what's needed now and the flexibility for future growth.

The 6564 Scanners are provided with BNC, Triax and type N connectors used by Guildline 6520 and 6500A Teraohmmeters. Optional adaptors are provided to support BPO, BNC, and other types of connections. The 6564 scanner accounts for all necessary measurement connections. The 6564 offers convenient operation from either the front panel or from the built in IEEE 488 bus. TeraCal™ Software included with the 6520 has built-in drivers to automatically address the scanners.



Complete Automated High to Ultra-High Resistance Measurement System!

6564 8 and 16-Channel, High to Ultra High Resistance Scanners

6564 Series Specifications

Isolation Specifications				
Measured Resistance Value	6564 Leakage Specification	6520 Transfer Mode Specification (4 Hours)	6520 Direct Reading Specifications (12 Month)	6636 Element Drift Specifications (12 Month)
100 MΩ	<0.1 ppm	25 ppm	150 ppm	15 ppm
1 GΩ	<0.1 ppm	25 ppm	200 ppm	35 ppm
10 GΩ	0.1 ppm	25 ppm	600 ppm	100 ppm
100 GΩ	1 ppm	25 ppm	800 ppm	200 ppm
1 TΩ	10 ppm	80 ppm	1000 ppm	500 ppm
10 TΩ	100 ppm	500 ppm	3500 ppm	750 ppm
100 TΩ	1000 ppm	700 ppm	6000 ppm	1000 ppm
1 PΩ	1 %	2000 ppm	2.5%	NA
10 PΩ	10%	5000 ppm	30%	NA

General Specifications					
Thermoelectric Potentials:	<20 nV typical and <50nV max.				
Relay Contact Ratings:	Life: >10,000,000 cycles at low levels				
	Initial Contact Resistance: 0.05 Ω max.				
	Current: 2A max at 10 V				
	Voltage Switched: 100 V max. at 1 mA				
	Voltage Non-Switched: 1000 V max.				
Leakage Resistance:	>100 ¹⁵				
Channel Outputs	Male N Type Termination – Optional Adaptors upon request				
Communication	IEEE 488 Standard				
Power Supply:	External 5V DC supply with input power 95~260VAC, 50/60Hz. Consumption – 51.3 VA				
Environmental	Temperature		Humidity		
	Operating	18 °C to 28 °C		15% to 80% RH	
	Storage	-20 °C to 70 °C		15% to 80% RH	
Dimensions	Height	Width	Depth	Weight	
	millimetres	143 mm	451 mm	420 mm"	15 kg
	inches	5.6"	17.7"	16.5"	33 lbs

ORDERING INFORMATION	
6564	16-Channel Low Thermal, Quad Scanner, 1000 V _{max}
6564/8	8-Channel Low Thermal, Quad Scanner 1000 V _{max}
/TM	Technical Manual (Included)
/CC	Certificate of Conformance (Included)
	*Precision Leads Set for Type N Available Upon Request
	*Optional Adaptors Include BPO
/Controller	System Controller with IEEE and Software Integrated
IEEE-PCI	NI IEEE-488.2 Interface for a PCI slot (Win 9X/NT/ME)
IEEE-2m	NI IEEE-488.2 Interface cable, 2m double shielded

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