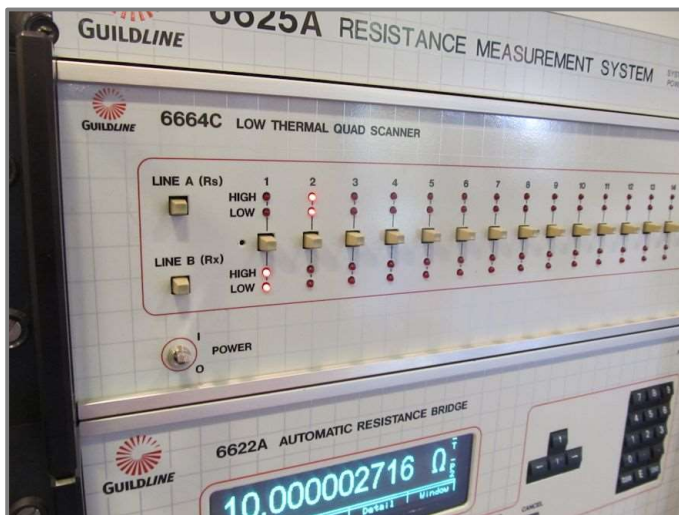


Complements All Guildline Bridges and Fully Automates Measurements



Guildline's 6664C Low Thermal Quad Scanner is the first commercial scanner capable of operating at 1000V. This has greatly improved the measurement/calibration throughput of standards laboratories, since many high ohm measurements can now be automated. High ohm measurements are typically hard to make and very time consuming because of the low signal/noise ratio.

With a Guildline model 6664C scanner and software, these hard-to-make high ohm measurements (up to 100 MΩ) can be automated and scheduled at any time that is convenient to a metrologist, even at night and over the weekends.



**THE 6664C LOW THERMAL QUAD CHANNEL SCANNERS ENABLES SOFTWARE CONTROLLED, FULLY AUTOMATED NORMAL AND HIGH OHM MEASUREMENTS WITH VOLTAGES UP TO 1000 V!**

This scanner is designed to work with a Guildline 6622A or 6640 Automatic Direct Current Comparator (DCC) Resistance Bridge Series, or our model 6622T or 6640T Temperature Bridge Series. Still have one of our older Guildline Automatic Bridges such as a model 6675A? Our software and scanner also supports all previous Guildline' models.

### FEATURES

- Withstands up to 1000 Vdc to provide fully automated resistance measurements
- Each Channel handles Up to 2 Amps
- Thermoelectric Potentials: <20 nV
- Contact Life: >10,000,000 Cycles
- Front Panel or Remote GPIB Control
- 4 Terminal Switching Matrix, 8 or 16 Channel Inputs, 2 Channel Outputs
- 8 Channel is upgradeable to 16 Channels
- Gold Flashed Tellurium Copper Terminals
- Front Panel Indication of Selected Channels

Both 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. Gold fingers in the relay armature make direct contact to hard gold pads on special circuit boards, and inputs are attached directly to the relay boards thereby reducing the number of connections. All relays are sealed and mounted in a heavy gauge machined aluminum enclosure to maintain thermal equilibrium.

Leakages between the high and low circuits are reduced by switching them on different printed circuit boards. The 6664C offers convenient operation from either the front panel or from the built in IEEE 488 bus.

# 6664C Series of 8 and 16-Channel, Low Thermal Quad Scanners

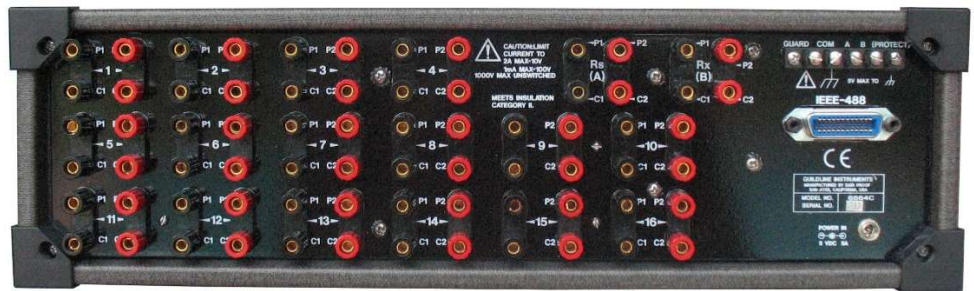


The 6664 Series of Low Thermal Scanners are perfect for either automated or manual measurements.

The 6664C Series is available in either 8 or 16 channels, with the ability to simply interconnect Scanners for even more channels when required. The rear connectors on the 6664C are 5 way, low thermal, gold plated terminals that will accept bare wire, spare lugs or banana connectors.

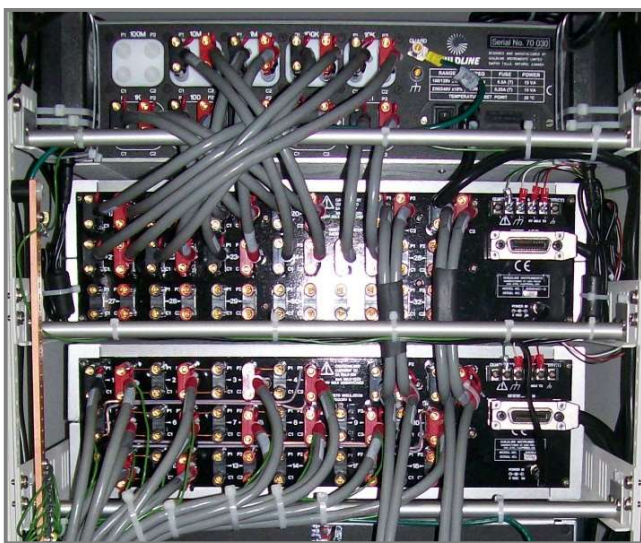
Unlike the competition, using these scanners with wire such as the Guildline Low Thermal SCW wire is easy – simply plug in.

For automation simply select required channels via the IEEE 488 Interface. To manually select 4-terminal devices connected to the input channels, simply press the push button switch on the Line A-output and another on the Line B-output. All other connections remain isolated.



The 6664C Series are the most widely implemented 4 Wire Resistance Scanner with hundreds of these scanners in the field today supporting over 200 6625A Bridge Systems. These systems can incorporate from one to 4 scanners in a system. Each scanner is extremely compact, only 3U in height.

Front and Rear Views are provided showing both a single scanner in a 300 Ampere system; and how 2 Scanners are wired (rear view) in a 450 Ampere system. Notice on the rear view of the 450 Ampere system, two scanners allow a 10- Element Resistance Standard to be connected with our unique 66252 DMM switch (not shown) to enable customers to both measure resistance with the system AND allow the 6634A Resistance Standard to be sourced for other applications such as Long Scale DMM Calibration without disconnecting any leads. Capabilities no other manufacturer offers!



Rear View – 450 Ampere System - 2 Scanners



6625-300 Ampere System, from 1  $\mu\Omega$  to 1G $\Omega$  with single 6664C Scanner

## 6664C Series of 8 and 16-Channel, Low Thermal Quad Scanners

The 6664C performs switching for precision resistance measurements with less than 20 nanovolt of thermal offsets. Careful design in the use of latching relays, requiring only a short pulse to actuate, eliminates self-heating errors. Protection circuits prevent selection of more than one 4 terminal connection on a channel output at the same time. Front panel indicators show which channel is selected on each output

SPECIFICATIONS				
<b>Thermoelectric Potentials:</b>	<20 nV typical and <50nV max.			
<b>Relay Contact Ratings:</b>	Life: >10,000,000 cycles at low levels	Current: 2A max at 10 V		
	Voltage Non-Switched: 1000 V max.	Voltage Switched: 100 V max. at 1 mA		
	Initial Contact Resistance: 0.05 $\Omega$ maximum			
<b>Leakage Resistance:</b>	>10 <sup>15</sup>	<b>Communications</b>	24 pin IEEE 488 connector	
<b>Inputs/ Outputs:</b>	Input: 16 or 8 channels of 4-terminal gold flashed tellurium copper binding posts Output: 2 channels of 4-terminal low thermal 5-way binding posts			
<b>Power Supply:</b>	External 5V DC supply 95-260V, 50/60Hz. Consumption – 51.3 VA (Provided)			
<b>Environmental</b>	Temperature		Humidity	
Operating	18 °C to 28 °C		15% to 80% RH	
Storage	-20 °C to 70 °C		15% to 80% RH	
<b>Dimensions</b>	Height	Width	Depth	Weight
millimetres	143 mm	451 mm	420 mm"	7.5 kg
inches	5.6"	17.7"	16.5"	16.5 lbs

### MODEL 6664B SCANNERS

The older 16-Channel model 6664B is still available to interested customers (NSN 6625-01-487-6544 RH). These scanners are only rated for 600 V operations. Other specifications are identical to those of the model 6664C.

ORDERING INFORMATION	
6664C	16-Channel Low Thermal, Quad Scanner, 1000 V <sub>max</sub>
6664C/8	8-Channel Low Thermal, Quad Scanner 1000 V <sub>max</sub>
6664B	16-Channel Low Thermal, Quad Scanner, 600 V <sub>max</sub>
Technical Manual and Certificate of Conformance included	
/Lead-11	Low Thermal Lead Pair w/Gold Plated Banana Plugs, 1M length
/Lead-12	Low Thermal Lead Pair w/Gold Plated Banana Plugs, 2M length
/Lead/Xm	SCW Lead Pair with gold plated banana plugs X m (specify)
SCW/18-30	30 Meters Shielded, Copper, Low Thermal Wire, AWG18 Gauge
SCW/18-100	100 Meters Shielded, Copper, Low Thermal Wire, AWG18 Gauge
*Other Precision Leads Are Available – Call and tell us your requirements	
/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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