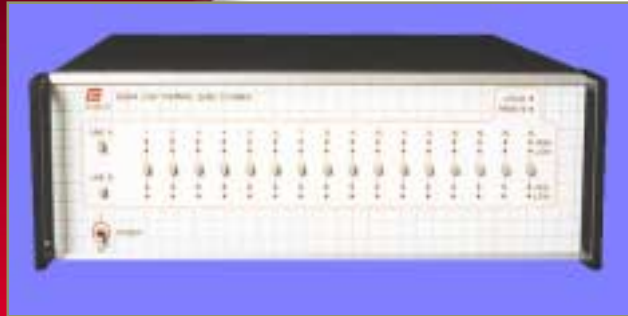


LOW THERMAL QUAD SCANNER

COMPLEMENTS AND EXTENDS GUILDLINE BRIDGES FOR INCREASED FLEXIBILITY



Guildline 6664B Low Thermal Quad Scanner allows for the direct comparison of four terminal resistance standards, such as the Guildline 9330 and 9334A standard resistors. The scanner is designed to work with the Guildline Automatic Direct Current Comparator (DCC) Resistance / Temperature Bridges.

Four terminal resistance comparisons can be made simply by selecting one device on the A-output lines and another on the B-output lines. All four connections for both resistors on the matrix are switched. All other connections remain floating.

The 6664B performs switching for precision resistance measurements with less than 20 nanovolts of thermal offsets. Careful design in the use of latching relays requiring only a short pulse to actuate, eliminates self heating errors.

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6664B FEATURES

- > *Thermoelectric Potentials: <20 nV*
- > *Contact Life: >10,000,000 cycles*
- > *Front Panel or Remote GPIB Control*
- > *4 Terminal Switching Matrix, 16 Channel inputs, 2 Channel outputs*
- > *Gold flashed Tellurium Copper Terminals*
- > *Front panel indication of channels selected*

Gold fingers on 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 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 6664B offers convenient operation from either the front panel or from the built in IEEE-488 bus.

The logical input and output arrangement makes for easy connections to automate the Guildline Resistance / Temperature Bridges. With the extremely low thermal offsets, this scanner simplifies the measurement process.

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.

6664B LOW THERMAL QUAD SCANNER

ELECTRICAL 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: 600 V max.
Leakage Resistance:	>10 ¹² Ω
Rear Panel Inputs:	16 by four – terminal low thermal binding posts, gold flashed tellurium copper
Rear Panel Outputs:	Two by four–terminal low thermal binding posts
Bus Inputs:	24 pin IEEE - 488 connector
Power Supply:	External 5V DC supply powered by 95~260V, 50/60Hz. Consumption – 51.3 VA (supplied with each unit)

6664B ORDERING INFORMATION

6664B	Low Thermal Quad Scanner
TM6664B	Technical Manual (included) Certificate of Conformance (included)

ACCESSORIES:

6664A-10	SCW Lead Set, Low Thermal (insulated pairs of solid copper wire with shield, insulation resistance >10 ¹⁴ ohms) The 6664A lead set consists of the following items: Qty 2- SCW lead pairs 1M long with gold plated banana jacks on one end and trimmed leads on other end. Qty 4- SCW lead pairs 2M long with gold plated banana jacks on one end and trimmed leads on other end.
6664A-11	SCW Lead Pair with gold plated banana plug, 1 m in length
6664A-12	SCW Lead Pair with gold plated banana plugs, 2 m in length
6664A-13	SCW Lead Pair with gold plated banana plugs X m in length

GENERAL SPECIFICATIONS

Environment:	Operating	+18 °C to +28 °C, 15 to 80% RH
	Storage	-20 °C to +70 °C, 15 to 80% RH
Power Requirements		51.3 VA maximum
Weight:		13 kg (29 lb)
Dimensions:		143 H x 451 W x 420 D (mm) (5.6 H x 17.7 W x D16.5 in)

GUILDLINE IS DISTRIBUTED BY:

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