

Model 3525

IMPEDANCE MEASUREMENT INSTRUMENTS

- **0.08% Basic Accuracy**
- **Fast - 15mS Measurement Speed**
- **Compact Size**
- **Easy to Use**
- **Manual or Automated Operation**
- **Better than Agilent at half the price**
- **99 Storable Panel Settings**
- **Built in Comparator Function with External Buzzer**
- **Highly Visible, Dual, 4-1/2 Digit LED Displays**
- **Voltage & Current Monitors**
- **Standard RS-232C & I/O Interfaces**
- **Optional GPIB or BCD Interfaces**
- **3-Year Warranty**

General-Purpose Programmable LCR Meter

The Model 3525 is TEGAM's ultimate solution for applications that require low-cost, high-accuracy impedance parameter testing. Its amazingly flexible design allows it to accommodate a diverse range of testing applications including testing of capacitors, inductors, coils, resistors, materials, thermoelectric cooling devices, piezo-electric sensors and other sensors or components. The instrument is ideal for manual or automated operation.

Nine AC Measurement Parameters

Up to 9 impedance parameters are easily viewed on each of the 3525's two 4-1/2 digit LED displays.

Display A provides accurate and repeatable readings of Inductance (L), Capacitance (C), Resistance (R), or Impedance ($|Z|$) at a basic accuracy of 0.08%!

Display B indicates measurement values for Dissipation Factor (D or $\tan \delta$), Quality Factor (Q), Phase Angle (θ), Measurement Voltage (V) or Measurement Current (I).

All parameters are selectable from the front panel and may be measured as Series or Parallel equivalents.

Compact

The 3525's compact size is unprecedented and allows side-by-side mounting in standard 19" racks. It measures less than 8" X 4" X 7" (WxHxD) and weighs 5-1/2 pounds. But don't let its size fool you; the 3525 is packed with functionality and value.

Easy to Use

The 3525's user friendliness was implemented as a design specification. Anyone can use this device and begin taking accurate and repeatable readings immediately. The easy-to-use front panel makes instrument operation totally intuitive. There is no need to search hidden submenus to find the instrument's settings. All settings are indicated on the front panel with high visibility LEDs.

Comparator with External Buzzer

A built in GO/NO-GO comparator makes the 3525 an ideal choice for manual verification of component values for QA or manufacturing. An audible beeper increases efficiency by eliminating the need for the user to read the display. Total test time and operator errors are significantly reduced. A front panel lock feature prevents accidental changes of instruments settings.

High Performance at a Low Cost

No other LCR meter has the performance density of the 3525. This innovative solution for cost-sensitive LCR applications is accurate and fast in manual or automated applications. The 3525 performs basic LCR measurements better than Agilent's "most cost effective solution," at less than half its price. The Model 3525 is backed by a full 3-year warranty and TEGAM's 30-day no risk trial. If for any reason you are not satisfied with the performance of the instrument, you can return it for full credit.



Prices and specifications subject to change without notice.

TEGAM[®]

YOUR GLOBAL SOURCE FOR TEST
AND MEASUREMENT SOLUTIONS

Model 3525

GENERAL - PURPOSE PROGRAMMABLE LCR METER

Specifications

Comments:

Measurement Parameters

	L (Inductance)	L > 1.6000μH - 199.99kH												
	C (Capacitance)	C > 0.9400pF - 199.99mF												
	R (Resistance)	R > 0.0100Ω - 199.99MΩ												
	Z (Impedance)	Z > 0.0100Ω - 199.99MΩ												
	D (Dissipation Factor / Tan Delta)	D > 0.0001 - 19.999												
	Q (Quality Factor)	Q > 0.5 - 199.99												
	θ (Phase Angle)	θ > -180.00° - +180.00°												
	V (Inter-Terminal Voltage)	V > 0.00V - 1.00V												
	I (Inter-Terminal Current)	I > 0.00mA - 10.00mA												
Measurement Ranges	Ten Programmable Ranges													
Typical Basic Accuracy	0.08%	Dependent Upon Test Variables and Measured Impedance												
Measurement Frequency	1kHz, 120 Hz	±0.01% Frequency Accuracy												
Output Impedance	100Ω ± 10Ω													
Output Amplitude	50mV, 500mV, 1.00V	± (10% ± 10mV) Programmable Test Voltage												
Maximum Short Circuit Current	10mA													
Measurement Ranges	0.1Ω - 100M Ω <i>NOTE: Measurement Ranges are based on Z . Values other than Z are calculated values.</i>	10 Ranges - Auto or Manual Modes												
Measurement Modes	Series or Parallel Equivalent Circuit	Auto or Manually Selected												
Displays	Dual - High Visibility, 4-1/2 Digit LED Displays													
Measurement Speed	<table border="1"> <thead> <tr> <th>MODE \ MEASUREMENT FREQUENCY</th><th>120 Hz</th><th>1kHz</th></tr> </thead> <tbody> <tr> <td>FAST</td><td>40mS</td><td>15mS</td></tr> <tr> <td>NORMAL</td><td>90mS</td><td>50mS</td></tr> <tr> <td>SLOW</td><td>360mS</td><td>250mS</td></tr> </tbody> </table>	MODE \ MEASUREMENT FREQUENCY	120 Hz	1kHz	FAST	40mS	15mS	NORMAL	90mS	50mS	SLOW	360mS	250mS	<i>NOTE: Measurement speed is determined by a number of factors. These are calculated measurement times based on instrument measurement mode and test frequency. There are three user-selectable measurement speeds.</i>
MODE \ MEASUREMENT FREQUENCY	120 Hz	1kHz												
FAST	40mS	15mS												
NORMAL	90mS	50mS												
SLOW	360mS	250mS												
Trigger	Internal and External Triggering	External Triggering is achieved through the Front Panel, or through rear mounted user interfaces.												
Measurement Terminals	5 Terminal, Kelvin	Configuration: BNC Connectors for Kelvin and a Guard Binding Post												
Zero Offset	Open (>1kΩ) or Short Circuit (<1kΩ) Null													
Comparator	HI-GO-LO	Dual Comparator Functions for A & B Displays												
External Buzzer	Set for PASS/FAIL of Comparator Functions													
Stored Settings	99 Stored instrument Settings	May be stored or recalled through the front panel or remote interface.												
Front Panel Key Lock	User is able to lock the front panel to prevent accidental bumping of the front panel keys.													
User Interfaces	CONTROL I/O Connector RS-232C GPIB (IEEE-488) BCD Interface	Standard Standard Optional PN# 3501 Optional PN# 3502												
Safety	Conforms with IEC 61010-1	CE Marked												
Operating Environment	32° - 104°F (0 - 40°C) @ <80% RH Non-Condensing	Double the measurement errors for conditions outside of this range.												
Storage Environment	14° - 131°F (-10 - 55°C) @ <80% RH Non-Condensing													
Power Requirements - User Selectable	100, 120, 220, & 240 VAC @ 50/60 Hz	Consumption: 20VA ± 10%												
Dimensions	7.88" X 3.94" X 6.70" (20 X 10 X 17 cm)	W X H X D												
Weight	5.5lb (2.5 kg)	Approximate Weight Standard Unit												
Included Accessories	Operation Manual Kelvin Klips Grounded Power Cord	PN # 3525-900-01CD PN # 47454 PN # 161006600												
Options	Radial Lead Adapter Chip Tweezers Chip Test Fixture BCD Interface GPIB (IEEE-488) Interface	PN # 3510 PN # 2005B PN # 3511 PN # 3502 PN # 3501												

This data sheet was current when it was produced. However, products are constantly being updated and improved. Because of this some differences may occur between the descriptions herein and the current product. Prices and specifications may be changed without notice.



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