TEGAM

Models 252 and 253

IMPEDANCE MEASUREMENT INSTRUMENTS

Digital Impedance Meters

- Automatic L, R, C, G and D measurements
- Basic accuracy 0.25%
- Auto-ranging version, 253
- Test frequency 1 kHz
- Shielded four-terminal connections to unknown
- Optional rechargeable battery power pack

TEGAM Models 252 and 253 are used for evaluating and inspecting components. These meters provide direct, digital display of inductance, capacitance, resistance, conductance and dissipation. They have the versatility and basic measurement accuracy of 0.25%, to satisfy demanding engineering and inspection applications, while being extremely easy to use.

Simply push the button for the desired function, set the range and connect to the unknown. True four-terminal connections are ensured by the standard Kelvin Klip® test leads. The measurement is displayed on the large 3-1/2 digit readout.

The Model 253 has all of the above characteristics, an auto-ranging feature, and includes one additional measurement range for C and G.

An optional battery power pack (252/SP2596 or 253-SP2598) is available on both versions. This allows these meters to be used with line power when available and unplugged when convenient or necessary.

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252 Ranges								
Range No.	**0**	**1**	**2**	**3**	**4**	**5**	**6**	**7**
L_S	200 µH	2 mH	20 mH	200 mH	2 H	20 H	200 H	
C_P	200 pF	2 nF	20 nF	200 nF	2 µF	20 µF	200 µF	
R_S	2 Ω	20 Ω	200 Ω	2 kΩ	20 kΩ	200 kΩ	2000 kΩ	
G_P	2 µS	20 µS	200 µS	2 mS	20 mS	200 mS	2000 mS	
D	1.999							
253 Ranges								
Range No.	**0**	**1**	**2**	**3**	**4**	**5**	**6**	**7**
L_S	200 µH	2 mH	20 mH	200 mH	2 H	20 H	200 H	200 H
C_P	200 pF	2 nF	20 nF	200 nF	2 µF	20 µF	200 µF	2000 µF
R_S	2 Ω	20 Ω	200 Ω	2 kΩ	20 kΩ	200 kΩ	2000 kΩ	2000 kΩ
G_P	2 µS	20 µS	200 µS	2 mS	20 mS	200 mS	2000 mS	20 S
D	1.999							
Accuracy (15° C to 35° C)								
L_S	±(0.25% + (1 + 0.002R_S*) counts)**	±(0.25% + (1 + 0.001R_S*) counts)					±(0.25%+ (1 + 0.002R_S*) counts)	±(0.25% + (1 + 0.002R_S*) counts)
C_P	±(0.25% + (1 + 0.002G_P*) counts)**	±(0.25% + (1 + 0.001G_P*) counts)					±(0.25% + (1 + 0.002G_P*) counts)	±(0.5% + (1 + 0.004G_P*) counts)
R_S	±(0.25% + (1 + 0.002L_S*) counts)	±(0.25% + (1 + 0.001L_S*) counts)					±(0.25% + (1 + 0.002L_S*) counts)	0.25% + (1 + 0.002L_S*) counts)
G_P	±(0.25% + (1 + 0.002C_P*) counts)	±(0.25% + (1 + 0.001C_P*) counts					±(0.25% + (1 + 0.002C_P*) counts)	±(0.5% + (1 + 0.004C_P*) counts)
D	±(1% + 0.002) for L or C ≥ 200 counts; ±(2% + 0.010) for L or C from 50 to 199 counts							±(2% + 0.10)
Test Signal								
Voltage C_P, G_P	1.0 V_{RMS}		0.1 V_{RMS}					0.01 V_{RMS}
Current L_S, R_S	100 mA	10 mA	1 mA	100 µA	10 µA		1 µA	

* Digit count, same range

** After correction for test lead zero reading 0°C to 15°C and 35°C to 50°C add 0.1 (rated accuracy) °C

Test Frequency	1 kHz		
Measurement Speed	4 per second; one second required for first reading after connection to unknown		
Connection to Unknown	Four-terminal, guarded. Kelvin Klips® supplied with unit		
Display	3-1/2 digits with decimal point; blanked for overload conditions		
External Bias	0 to 50 VDC		
Analog Outputs	L, C, R or G, with simultaneous output of D for L and C		
Static Charge Protection	Diode and resistor discharge network		
Power Requirements	100 to 125 V or 200 to 250 V, 50/60 Hz, 4 W		
Dimensions	Height: 10 cm (4 inches), Width: 26 cm (10 inches), Depth: 37 cm (14.6 inches)		
Weight	3.2 kg (7 lbs) net.		
Accessories	Included:	Kelvin Klip	P/N CA-162-36
		Instruction Manual	P/N 43158-CD
		Fenwal Sensor Pins	P/N 062-263 (2) & 062-261 (2)
	Optional:	4-Terminal Kelvin Chip Tweezers	P/N 2005B/SP5132
		Kelvin Klip Replacement Kit	P/N KK100
		Front Panel Dust Cover	P/N 43374
		Chip Tweezer Rebuild Kit	P/N 47422