WIDE RANGE RESISTANCE METER

Model 871

Autoranging, microcomputer-based resistance meter measures from Ohms to Terraohms. Meets specification requirements of ESDA, ASTM, EIA, SAE, DOD plus international documents including IEC and CECC specifying test voltages of 10 and 100 Volts.

Features:

■ Measurement range:

$$1x10^3 - 5x10^9 \Omega @ 10V$$

 $1x10^5 - 5x10^{12} \Omega @ 100V$

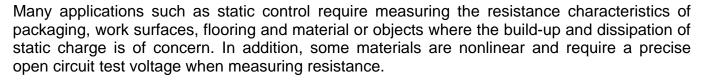
Autoranging

Accuracy:

$$\pm 2\%$$
, $10^3 - 10^9 \Omega$
 $\pm 5\%$, $10^9 - 10^{12} \Omega$

- □ Large 2-line alphanumeric display
- Remote measurement activation
- Compatible with most resistance probes
- □ PC compatible COMM port
- □ Battery or AC powered

Applications:



The ETS Model 871 Wide Range Resistance Meter is a precision, battery or AC powered, autoranging, microcomputer-based instrument that meets the requirements for measuring resistance from 1x10² - 5x10¹² Ohms using selectable test voltages of 10 or 100 Volts.



Description:

The ETS Model 871 Wide Range Resistance Meter is a precision, microcomputer-based instrument that measures resistance from 1×10^2 - 5×10^{12} Ohms using selectable test voltages of 10 or 100 Volts. The Meter is activated when the **MEASURE** select paddle switch is moved from **STANDBY** to either the V_e =10V or 100V position. An optional foot switch enables remote activation of the instrument making it very convenient when measurements are being performed in a test chamber. A universal power module (90-265 VAC, 50/60 Hz) is included that permits continuous operation of the Meter without draining the batteries. A 2-line alphanumeric LCD readout displays the measured resistance on the top line and the test voltage (V_e =10 or 100V) on the bottom line. Resistance is displayed in engineering units (ex. $6.35e+8\Omega = 6.35 \times 10^8 \Omega$) plus **UNDERSCALE and OVERSCALE** indication. The lowest measurable resistance is 100Ω at 10V and $10k\Omega$ at 100V. The highest measurable resistance is approximately $5 \times 10^9 \Omega$ at 10V and $5 \times 10^{12} \Omega$ at 100V. Measurement accuracy is better than $\pm 2\%$ over the entire measurement range. A separate ON/OFF switch plus deactivating the backlight when battery power is used extends battery life. When battery voltage is low, **Low Battery** is automatically displayed.

A 9-pin sub-D COMM port provides real time data to the Hyper Terminal of a PC running Windows®. This data can then be transferred to a spreadsheet or other program to obtain the desired data logging and/or analysis.

The dual capability of operating from either battery or AC power makes the Model 871 an ideal instrument for both laboratory and field use.

Any resistance probe that can be connected to the Model 871 via standard banana jacks located on the rear of the instrument can be used Refer to available ETS Series 800 Resistance/Resistivity Probes literature sheets for probes to meet virtually any surface, volume (solids, liquids and powders) and point-to-point resistance measurement requirement.

Specifications:

Measurement range:

 $1 \times 10^{3} - 5 \times 10^{11} \Omega$ @ 10V $1 \times 10^{5} - 5 \times 10^{12} \Omega$ @ 100V

Test voltage: 10 & 100V $\pm 5\%$ Voltage Select: Manual

Display: 2-line LCD alphanumeric

Backlite OFF with battery pwr. Backlite ON with AC pwr

Resolution: ± 0.01

Accuracy: $\pm 2\%$ @ $10^3 - 10^9 \Omega$; $\pm 5\%$ @ $10^9 - 10^{12} \Omega$ **Reading display:** Engineering units (ex: 2.33 **e**8)

Optional (ex: 233 M Ω)

Under scale display: UNDERSCALE
Over scale display: OVERSCALE
Communication properties:

Hyper Terminal program
Baud rate: 9600
Data bit: 8
Stop bit: 1
Parity: Nano

Parity: None Flow Control: None

Connectors:

Measuring Probe:

0.161" (41mm) Banana jacks V_e (Red), SENSE (Blk), GND (Grn) Ground: 0.161" (41mm) Banana jack

Foot switch: 3.5mm

COMM PORT: 9-pin sub-D serial Cable: 3' (92cm) 3-cond., shielded, Teflon™

Power: 2x9 V Alkaline batteries Low Battery display: <13 V 15 VDC Universal pwr module

N. American plug (90-265 VAC, 50/60 Hz)

Enclosure: Aluminum with tilt stand Dimensions: 7.3"Wx2.5"Hx9.0"D (17.8x6.4x22.9cm)

Foot switch: (Optional)

Warranty: One (1) year