MONROE ELECTRONICS

100 HOUSEL AVENUE
LYNDONVILLE, NY 14098
800 821 6001
716 765 2254
FAX 716 765 9330

Application Note APNE-0013
Comparison of Monroe Electronics' Resistance/Resistivity Meters

	Model 264A	Model 291	Model 283	Model 262A	Model 272A
Value	Least cost – good tool for quick evaluations	Low cost – good performance	Medium cost – complete test kit	Proven workhorse	Top of the line – premium features
Display type	8 LED's	12 LED's	6-character LCD display	11 LED's	16-character alphanumeric LCD
Minimum sample size	2" x 2"	2" x 2.5"	3" x 3"	1" x 5"	2.25" dia.
Electrode type	Parallel rails	Parallel rails	Parallel rails	Parallel rails	Concentric rings
Electrode material	Conductive rubber	Plated metal	Conductive rubber	Conductive rubber	Conductive rubber
Range(s)	E5 thru E12	E3 thru E12	E3 thru E12	E4 thru E14	8E3 thru 2E14
Power system	9-volt battery	9-volt battery	9-volt re-chargeable ni-cad battery system	Built-in re-chargeable	Built-in re-chargeable
Applied voltage(s)	Approx. 7.2 to 9 volts	10V/100V automatic	10V/100V selectable	10V/100V automatic	10V/100V selectable
Accuracy	±½ decade	±½ decade	±15% to ±30%	±½ decade	±0.1 decade
CE certification	Yes	Yes	No	Yes	No
Surface to ground measurements	Yes	Yes	Yes	Yes	Yes
Volume resistivity measurements	No	No	No	No	Yes
Outstanding feature	Pocket-sized	Color-coded display	Complete kit with 2 weighted electrodes	Will measure cylindrical specimens such as rollers	Displays values in logarithmic or scientific notation. Special electrodes available.
2-year warranty	Yes	Yes	Yes	Yes	Yes
Resistivity - **rē´zis - tiv´ə-ti**	Often mispronounced and misunderstood. Loosely, *surface resistivity* (ρ_s) is the resistance measured between two opposite sides of a square of material and *volume resistivity* (ρ_v) is the resistance measured between two opposite faces of a cube of material. *Surface resistivity* is generally expressed in *ohms per square* (Ω/■). The size of the "square" is immaterial. *Volume resistivity* is expressed in ohm-centimeters (ohm•cm or Ω•cm). Regardless of the size or shape of the measured sample, the volume translates back to the measurement of a one centimeter cube.				