



PRS-812 Resistance Meter Set

The Prostat PRS-812 is a unique, constant voltage, wide range ohmmeter with data logging and calculating capabilities. Fully portable and battery operated, the PRS-812 measures resistance from <0.1 to 1.0×10^{12} ohms with measurement accuracy of $\pm 5\%$. It can be operated in fully Automatic, Automatic-Manual and Manual modes.

This sophisticated instrument digitally displays measurements in Ω , $K\Omega$, $M\Omega$, $G\Omega$ and $T\Omega$, and in exponential format, e.g., $1.5E08$.

It simultaneously displays data with a fully synchronous analog scale using $\times 1$, $\times 10$ and $\times 100$ multipliers, and a bank of color programmable LED's ($<10^3$ to $>10^{14}$ Ohm). Multiple test voltages include 0.01-10V, constant 10V and 100V ranges, which may be selected automatically by the instrument to comply with industry measurement practices or Manually by the operator.

The PRS-812 records and stores up to 80 measurements, and calculates Minimum, Maximum and Average of all stored data. Fully automatic, the PRS-812 controls test voltage, resistance ranging and electrification period to make the most accurate and repeatable measurements available to ESD Auditors and technicians.

Specifications

Range:

Optimal Resistance Range from <0.1 ($1.0E-1$) Ohms to 1 Tera ohms ($1.0E+12$ ohms). Maximum resistance indication: 200 Tera ohms ($2.0E+14$ ohms).

TEST VOLTAGES

Automatic mode Default:

Constant Voltage:
At 10 & 100 Volts

<0.01 to 10 Volts Variable $1.0E-1$ to $1.0E+4$ Ohms
10 Volts $\pm <0.2$ Volts $1.0E+4$ to $1.0E+6$ Ohms
100 Volts $\pm <2.0$ Volts $1.0E+6$ to $2.0E+14$ Ohms

Manual Mode:	<p>< 0.01 to 10 Volts Variable 1.0E-1 to 1.0E+5 Ohms 10 Volts \pm < 0.2 Volts 1.0E+3 to 1.0E+9 Ohms 100 Volts \pm < 2.0 Volts 2.0E+5 to 2.0E+14 Ohms</p>
Accuracy:	<p>Overall: \pm < 5% at ambient conditions (at 23°C and 30% Rh).</p> <p>Specific Range Tolerances: 1.0E-1 to 1.0E+1 ohms: \pm5% Corrected for Test Lead Resistance</p> <p>1.0E+1 to 1.0E+12 ohms: \pm2.0% with 10-foot Test Leads</p> <p>1.0E+12 to 2.0E+14 ohms: \pm40% or \pm0.25 Decade with Grounded, Shielded Leads</p>
Display:	<p>Multi-function 2-5/8" x 1-5/8" Liquid Crystal Display with 0.5" digit height. Displays 3-1/2 digits in Ohms, or 1.0EXX in exponential format. Ohms Display indicators: Ω, KΩ, MΩ, GΩ and TΩ. Includes 19-segment analog scale (1-10 with 0.5 indication) with x1, x10, & x100 multipliers. Number of Data Points in Memory (0 – 80). Automatic Electrification Time (seconds), or Time required to Manually obtain steady state measurement. Displays data HOLD, BATTERY status, MIN, MAX, AVG, REC and Test Voltage (<10, 10, or 100 V)</p>
LED Indicators:	<p>14 Color Programmable LED's from $<10^3$ to $>10^{14}$ ohms. Colors (RED, GREEN, YELLOW, or Blank/OFF) may be operator programmed in SETUP mode.</p>
Timer:	<p>Times measurements In Seconds up to 99 seconds (Displayed on LCD)</p>
Memory:	<p>Register stores up to 80 data points (MEM # Displayed after RESET)</p>
Response & Electrification:	<p>Response from >0.1 to $<1.0E06$ Ohms: <2.0 seconds Average Measurement Period from 0.1 ohms to 1.0E12 Ohms 2.5 Seconds. Calculated Electrification Period per ESD S11.11, 7.5 seconds 0.1 ohms to 10E+12 Ohms. Programmed Electrification 1.0E+12 to $>2.0E14$ Ohms: 15.0+ seconds</p>
Power:	<p>Two 9 Volts alkaline batteries. Nominal battery life 25 hours.</p>
Dimensions (W x L x D):	<p>4.0" x 6.0" x 2.0" (10 cm x 15 cm x 5 cm)</p>

Weight: 22 oz with batteries (624g)
Open Circuit Current (I): <4 ma @ 100 Volts

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1072 Tower Lane, Bensenville, IL 60106 USA
Phone +1 (630) 238-8883 Fax +1 (630) 238-9717
Web access: <http://www.prostatcorp.com>

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