PROSTAT®
CORPORATION

PROFESSIONAL
STATIC
CONTROL
PRODUCTS

PRS-801 Resistance System Set

The Prostat PRS-801 is a unique, constant voltage, wide range ohmmeter with data logging, calculating and computer communication capabilities. Fully portable and battery operated, the PRS-801 measures resistance from <0.1 to $2.0x10^{14}$ ohms with measurement accuracy of ±5%. It can be operated in Automatic, Automatic-Manual and Manual modes.

This sophisticated instrument digitally displays measurements in Ω, KΩ, MΩ, GΩ and TΩ, and in exponential format, e.g., 1.5E08.

It simultaneously displays data with a fully synchronous analog scale using x1, x10 and x100 multipliers, and a bank of color programmable LED's (<10^3 to >10^{14} Ohm). Multiple test voltages include 0.01-10V, 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-801 records and stores up to 80 measurements, and calculates Minimum, Maximum and Average of all stored data. Data may be downloaded to standard computer systems via the instrument's RS-232 Output Port, serial cable and supplied software for ESD Program documentation in Windows® Excel® spread sheets.

Fully automatic, the PRS-801 controls test voltage, resistance ranging and electrification period to make the most accurate and repeatable measurements available to ESD Auditors and laboratory technicians.

Specifications

Range: Resistance from < 0.1 (1.0E-1) Ohms to 200 Tera ohms (2.0E+14 ohms). Maximum Resistivity with S11.11 concentric ring 2.0E+15 ohms/square

TEST VOLTAGES

Automatic mode Default: < 0.01 to 10 Volts Variable 1.0E-1 to 1.0E+4 Ohms

Constant Voltage: 10 Volts ± < 0.2 Volts 1.0E+4 to 1.0E+6 Ohms

At 10 & 100 Volts	100 Volts ± < 2.0 Volts	1.0E+6 to 2.0E+14 Ohms

Manual Mode:

< 0.01 to 10 Volts Variable	1.0E-1 to 1.0E+5 Ohms
10 Volts ± < 0.2 Volts	1.0E+3 to 1.0E+9 Ohms
100 Volts ± < 2.0 Volts	2.0E+5 to 2.0E+14 Ohms

Accuracy: Overall: ± <5% at ambient conditions (at 23°C and 30% Rh).

Specific Range Tolerances:
1.0E-1 to 1.0E+1 ohms: ±5% Corrected for Test Lead Resistance

1.0E+1 to 1.0E+12 ohms: ±2.0% with 10-foot Test Leads

1.0E+12 to 2.0E+14 ohms: ±40% or ±0.25 Decade with Grounded, Shielded Leads

Display: 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)

LED Indicators: 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.

Timer: Times measurements In Seconds up to 99 seconds (Displayed on LCD)

Memory: Register stores up to 80 data points (MEM # Displayed after RESET)

RS-232 Output: Digital format: Exponential Power followed by Integer.

Response & Electrification: Response from > 0.1 to < 1.0E+06 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

Power:	Two 9 Volts alkaline batteries. Nominal battery life 25 hours.
Dimensions (W x L x D):	4.0" x 6.0" x 2.0" (10 cm x 15 cm x 5 cm)
Weight:	22 oz with batteries (624g)
Open Circuit Current (I):	< 4 mA @ 100 Volts

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Specifications subject to change without notice.
Printed in U.S.A. REV2: 6/20/07