

Wide Range Ohmmeter

PAS-853B



Wide Range Resistance Meter Designed to Support ANSI/ESD S20.20 Program Standard.

The PAS-853B is a wide range ohmmeter designed specifically for ESD Plant Auditors who must make many measurements quickly while supporting ANSIESD S20.20 Program Standard and periodic verification requirements. The PAS-853B performs in accordance with standard resistance measurement practices outlined in ANSI/ESD 541 Packaging and meets all audit requirements of ESD TR53.









CONTROLS

ON/OFF Battery Bus Cut-off

Slide Switch ON SIDE OF CASE

ON: Energizes instrument and LCD displays Software Version then GO A with AUTO indication (Default)

OFF: Isolates battery and DC voltage from instrument controls and circuit. Use for transport and storage

TEST Pad

With Test Leads installed: Press once & Release. Measurements performed automatically

In conjunction with MODE changes from Auto operation to Continuous

MODE Pad

Steps through Auto/Voltage ranges with each press of MODE Pad:

- AUTO: Default automatic resistance range & Voltage control
- <10V: Manual Operation 0.01 to ≤10V Test
 - Resistance Range: 0.01E-1 to 9.99E9 Ω
- 10V: Manual Operation at 10V (Nominal, Semi-Constant)
 - Resistance Range: 0.98E4 to 9.99E10 Ω
- 100V: Manual Operation at 100V (±<5V) Constant Voltage
 - Resistance Range: 0.98E6 to 9.99E12 Ω

When data in **HOLD**, press **MODE** to terminate **HOLD** without changing operational mode

- Press MODE with TEST to change from Auto to Continuous
- Used to measure lead resistance (NULL)
- Used by Prostat Authorized Technicians for Voltage Calibration

CONNECTIONS

Positive (+): Test Voltage (RED) - Supplies test voltage to electrodes/fixtures

Negative (-): Current sensing (BLACK) -Conducts current from electrode, fixtures or Ground to instrument

Chassis (♣): Shielding connection to chassis (WHITE) - Reduces transmitted energy and effect on current measurement

Note: ¾ inch spacing between RED and BLACK accommodates dual banana BNC adapters

INDICATION

Colored LED's indicate instrument operational MODE and Test Voltage (YELLOW) used for the current measurement, as well as measurement completion (GREEN LED).

- AUTO: ON during automatic operations; OFF in Manual mode
- <10V:
- 10V
- 100V
- GREEN LED: Measurement hold

ACCURACY

Overall:

 \pm <5% at ambient conditions (at 23°C and 30% Rh)

Nominal Range Tolerances:

± <5% at ambient conditions (at 23°C and 30% Rh)

0.01E-1 to $1.99E+0\Omega$: $\pm 10\%$, ± 2 Counts 2.00E+0 to 9.99E+9 Ω : ±2%, ±2 Counts 1.00E+10 to 9.99E+10: $\pm 5\%$, ± 2 Counts 1.00E+11 to 9.99E+11: ±10%, ±2 Counts 1.00E+12 to 9.99E+12: $\pm 20\%$, ± 4 Counts

TEST VOLTAGES

Automatically selected and controlled in AUTO mode. May be manually selected by pressing MODE pad in the following order:

<10V Variable based on resistance load

- Provides 0.001 to ≤10V
- Functional in AUTO within range 0.01 Ω - <1.0E+4 Ω
- Manual Operation Resistance Range: 0.01E-1 to 9.99E+9 Ω

10V Constant Voltage (Under Load)

- Test Voltage Varies \pm <5% in AUTO or Manual Operations
- Functional in AUTO within range $1.0E+4\Omega$ - <1.0E+6 Ω
- -Manual Operation Resistance Range: 0.9E+4 to 9.99E+10 Ω

100V Constant Voltage (Under Load)

- Test Voltage Varies ± <2% in AUTO or

Manual Operations

- Functional in AUTO within range 1.0E+6 Ω - <1.0E+13 Ω
- Manual Operation Resistance Range: 0.90E6 to 9.99E12 Ω

Returns to Auto Mode

MODES OF OPERATIONS

GO A: Performs all automatic and manual voltage select functions, stops and displays measurements after Electrification Period (EP) is complete, then displays data with Green LED ON for 10 seconds.

GO C: Performs all automatic and manual voltage select functions, continuously displays measurements until the operator presses MODE or TEST pads. GO C disables electrification period controls.

POWER

One 9V alkaline transistor battery; battery life > 50 hours

DIMENSIONS

7.25 in. (184 mm) x 4.3 in, (109 mm) x 1.4 in.

WEIGHT

13.2 oz. (375 gram) with battery installed

ENVIRONMENT

Operating Temp: 65°F to 90°F (18°C to 32°C) Operating Relative Humidity: 10 to 60 % Operating Altitude: Under 6500 ft. (2000 m)

Prostat recommends making measurements using its instruments and fixtures in an environment of 72 - 76° Fahrenheit (22 - 24° Celsius), 25 - 35% Relative Humidity.

NOTES

¹Tolerance and accuracy measurements were conducted under controlled conditions with close tolerance reference resistors.

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