

# Wide Range Ohmmeter PAS-853B

## Data Sheet

**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 ANSI/ESD 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  $\leq 10V$  Test Voltage;  
- Resistance Range: 0.01E-1 to 9.99E9  $\Omega$
- **10V:** Manual Operation at 10V (Nominal, Semi-Constant)  
- Resistance Range: 0.98E4 to 9.99E10  $\Omega$
- **100V:** Manual Operation at 100V ( $\pm < 5V$ ) Constant Voltage  
- Resistance Range: 0.98E6 to 9.99E12  $\Omega$

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:**  $\frac{3}{4}$  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

## TYPICAL TOLERANCES

<sup>1</sup>Nominal performance by range:

0.01E-1 -- 1.0E 0 $\Omega$	$< \pm 10\%$ , $\pm 2$ Counts
1.0E 0 – 9.99E10 $\Omega$	$< \pm 2\%$ , $\pm 2$ Counts
1.0E11 -- 9.99E12 $\Omega$	$< \pm 10\%$ , $\pm 4$ 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  $\leq 10V$
- Functional in **AUTO** within range  
0.01  $\Omega$  -  $< 1.0E+4 \Omega$
- Manual Operation Resistance  
Range: 0.01E-1 to 9.99E+9  $\Omega$

**10V** Constant Voltage (Under Load)

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

**100V** Constant Voltage (Under Load)

- Test Voltage Varies  $\pm < 2\%$  in **AUTO** or Manual Operations
- Functional in **AUTO** within range  
1.0E+6  $\Omega$  -  $< 1.0E+13 \Omega$
- Manual Operation Resistance Range: 0.90E6 to 9.99E12  $\Omega$

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. (36 mm)

## WEIGHT

13.2 oz. (375 gram) with battery installed

## NOTES

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

Do not attempt to open instrument case

- No internal operational parts or adjustments
- Provides access to 100DCV power supply
- Damage to instrument and environmental seals may occur
- Will void warranty
- Store instrument in case and dry environment

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