

TECHNICAL DATA

PRS-801B and PRS-812B Wide Range Resistance System and Meter



Product Highlights

- Accurate Wide Range Resistance Measurements
- Variable Voltage 0.1 mv to 9.99 V for low resistance measurements
- Constant Test voltages 10V and 100V
- Auto Resistance Range Control
- Auto Test Voltage Control
- Connect to Virtually any 2-wire Fixture or electrode configuration
- Uses rechargeable Li-ion batteries
- Provides up to 5 days of continuous use
- Internal memory up to 120 and 999 data sets
- Download to Excel® with Connect 2.0 (PRS-801B only)

What's included

- High Quality Test Leads
- Test Lead Shunt
- Premium Shielded Test Lead (PRS-801B only)
- High Resistance Test Lead (PRS-801B only)
- USB 2.0 A to Micro-B Cable
- AC/DC Power Supply with Multi-Blade Input
- Audit Test Bed
- NIST Traceable Calibration Certificate with Data

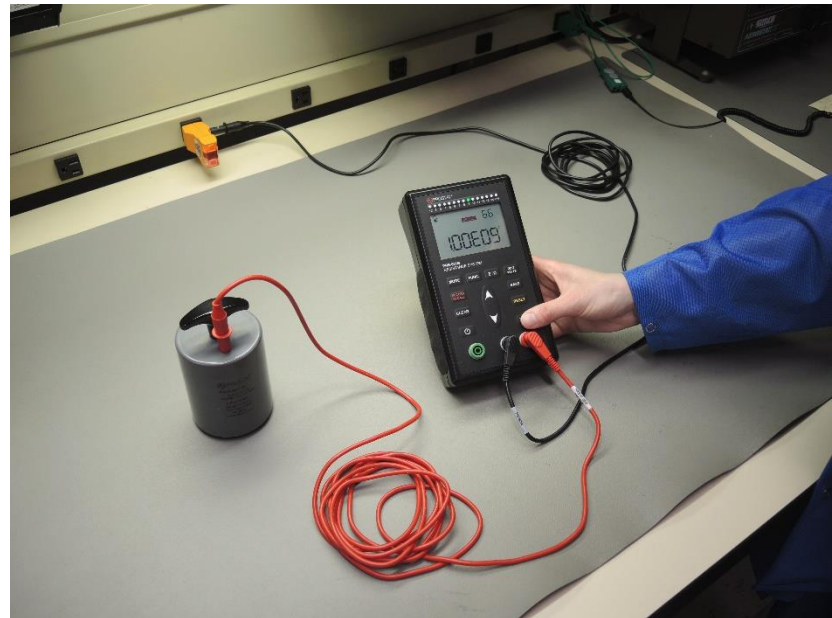
A Portable Wide Range Resistance Meter with high accuracy and fast Electrification Period.

The PRS-801B Resistance System Set is a wide range meter capable of measuring resistance from 0.01 ohm to 2.00E+14 ohms (200 Teraohm). The PRS-801B uses a constant test voltage system that is extremely stable and consistent with lab level, bench top instruments.

The PRS-812B's accurate wide range of 0.10 ohms to 1.00E+12 ohms, offers exceptional flexibility in measurement applications. The PRS-812B has Automatic, Manual and Auto-Manual operational modes, plus exponential display or standard numeric display in Ω , K Ω , M Ω , G Ω and T Ω .

Both the PRS-801B and PRS-812B use a Li-ion battery pack, rechargeable via USB. Battery life exceed 480 hours when measuring in Auto-Manual mode and allows you to typically make approximately 8,000 measurements.

Both models include an internal memory capable of storing up to 120 and 999 data sets.



General Specifications

| Characteristics | Model | |
|-----------------------------|---|---|
| | PRS-801B | PRS-812B |
| Measuring Range | 0.01 Ω to 2.00 x 10 ¹⁴ Ω | 0.10 Ω to 1.00 x 10 ¹² Ω |
| Measurement Modes | Auto, Manual, Auto-Manual, Continuous | Auto, Manual, Auto-Manual |
| Display | 6.9 cm x 4.8 cm (2.7" x 1.9") 6 digit - 7 segment color HTN display | |
| Battery Power | Re-chargeable Li-Ion battery (included). Battery swappable through easily accessible battery door at the rear of the instrument | |
| Battery Charging | Rechargeable via USB 2.0 through PC port or Wall Charger (included) | |
| Battery Charge Indicator | Battery has a status indicator on instrument screen | |
| Battery Charging Time | 2 hours | |
| Battery Life | 480 hours typical 50 hours (of continuous use) Approximately 8,000 measurements | |
| Memory Capacity | 999 data sets | 120 data sets |
| | Data sets include resistance, test voltage, electrification period and timestamp. | Data sets include resistance. |
| Data Download | Compatible with Connect 2.0 ¹ | N/A |
| USB | USB 2.0 A to Micro-B | |
| Operating Temperature | 10°C to 30°C (50°F to 80°F) | |
| Operating Relative Humidity | 0% – 85%, non-condensing | |
| Operating Altitude | 2000 m | |
| Storage Temperature | -30°C to +60°C (-22 °F to +140 °F) | |
| Dimensions (WxHxD) | 117 mm x 188.5 mm x 48 mm 4.59 in x 7.42 in x 1.90 in | |
| Weight | 510 g (1.12 lb) | 500 g (1.10 lb) |
| Case Material | Polycarbonate with Rubber Side Grips | |
| Color | Black | Grey |
| Warranty | 2 Year Limited Warranty ² | |

¹ Compatible with Microsoft® Windows® Operating Systems

² Warranty on the battery pack limited to a defective battery pack and excludes normal end of life of the battery. The warranty does not cover defects that are caused by normal wear and tear, inadequate maintenance, insufficient ventilation, transportation, storage or faulty repair, misuse, neglect, accident or abuse, modification to the battery pack.

Resistance Measurement Specifications

| Measuring Range | Resolution | Accuracy ¹ | |
|--|--------------------|-----------------------|-------------------------|
| | | 800LB and 800LR Leads | 800PSL and 800TVL Leads |
| 0.01 Ω to 0.99 Ω | 0.01E-2 to 0.99E-2 | ±5% ² | ±5% ² |
| 1.00 Ω to 9.99 x 10 ¹⁰ | 1.00E0 to 9.99E10 | ±2% | ±2% |
| 1.00 x 10 ¹¹ to 9.99 x 10 ¹¹ | 1.00E11 to 9.99E11 | ±5% | ±5% |
| 1.00 x 10 ¹² to 2.0 x 10 ¹⁴ | 1.00E12 to 2.00E14 | N/A | ±20% |

¹ at 23°C (73.5°F) and 30% RH

² Corrected for test lead resistance

Test Voltage Accuracy

| Test Voltage | Units | Resistance Range | Accuracy ¹ |
|--------------|-------|------------------|-----------------------|
| .0001 – 9.99 | V | 1E-2Ω to <1E4Ω | ± .05% |
| 10 | V | 1E4Ω to <1E6Ω | ± .05% |
| 100 | V | 1E6Ω to ∞ | ± .05% |

¹ at 23°C (73.5°F) and 30% RH

LED Indicators

| Resistance Measurement (Ω) | | Illuminated Decade LED |
|----------------------------|---------|------------------------|
| Min | Max | |
| 0 | 9.99E1 | <2 |
| 1.00E2 | 9.99E2 | 2 |
| 1.00E3 | 9.99E3 | 3 |
| 1.00E4 | 9.99E4 | 4 |
| 1.00E5 | 9.99E5 | 5 |
| 1.00E6 | 9.99E6 | 6 |
| 1.00E7 | 9.99E7 | 7 |
| 1.00E8 | 9.99E8 | 8 |
| 1.00E9 | 9.99E9 | 9 |
| 1.00E10 | 9.99E10 | 10 |
| 1.00E11 | 9.99E11 | 11 |
| 1.00E12 | 9.99E12 | 12 |
| 1.00E13 | 9.99E13 | 13 |
| 1.00E14 | 9.99E14 | 14 |
| >9.99E14 | | >14 |

Measurement Modes

| Mode | Resistance Range | Test Voltage | |
|-------------|-------------------------------|---------------------|--|
| Automatic | Automatic | Automatic | @<10V: 0.01 to <1.00E+04 Ω @ 10V: 1.00E+04 to <1.00E+06 Ω @100V: 1.00E+06 to <2.00E+14 Ω |
| Manual | Manual | Manual or Automatic | @<10V: 0.01 to <1.00E+05 Ω @ 10V: 1.00E+03 to <1.00E+09 Ω @100V: 2.00E+05 to <2.00E+14 Ω |
| Auto-Manual | Manual Start Automatic Run | Automatic | @<10V: 0.01 to <1.00E+04 Ω @ 10V: 1.00E+04 to <1.00E+06 Ω @100V: 1.00E+06 to <2.00E+14 Ω |
| Continuous | Automatic | Automatic | @<10V: 0.01 to <1.00E+04 Ω @ 10V: 1.00E+04 to <1.00E+06 Ω @100V: 1.00E+06 to <2.00E+14 Ω |

Electrification Period

| Resistance Range | Measurement Period | Minimum Electrification Period |
|---------------------------------------|--------------------|--------------------------------|
| 1.00E-2 Ω to <1.00E6 Ω | 2 seconds | 3 seconds |
| 1.00E6 Ω to <1.00E12 Ω | 2 seconds | 8 seconds |
| 1.00E12 Ω to <1.00E13 Ω | Variable | 15 seconds |
| 1.00E13 Ω to <1.00E14 Ω | Variable | 60 seconds |
| >1.00E14 Ω | Variable | 60 seconds |

801B-012 Li-Ion Battery Pack

| General Specifications | |
|---------------------------------|--|
| Battery Type | 3-cell, Rechargeable |
| Technology | Lithium-Ion Technology |
| Nominal Capacity | 2400mAh |
| Output Voltage | 3.7V |
| Performance Amp-Hour | 2.4Ah |
| Performance Watt-Hour | 8.88Wh |
| Transport Safety Certified | UN38.3 |
| IATA UN Number | UN3480 |
| IATA Class (Sub Hazard) | 9 |
| Operating Temperature | Discharging: -20°C to 60°C (-4°F to 140°F) Charging: 0°C to 45°C (32°F to 113 °F) |
| Storage Temperature | -5°C to 35°C (-23°F to 95°F) |
| Storage Humidity | ≤75% Rh |
| Battery Pack Dimensions (WxHxD) | 53mm x 48.5mm x 15mm 2.0" x 1.9" x 0.6" |
| Weight | 65g (2.2 oz) |

Ordering Information

| Part No. | Description |
|-----------|--|
| PRS-801B | Resistance System Set |
| PRS-801RM | Surface Resistance System Kit ¹ |
| PRS-812B | Resistance Meter Set |
| PRS-812RM | Surface Resistance Meter Kit ¹ |

¹ Includes 2 each PRS-801W 5lb Conductive Rubber Electrodes and a PMK-151C Carrying Case

Optional Accessories

| Part No. | Description |
|------------|--|
| PRS-801W | 5lb Conductive Rubber Electrode |
| PRS-801-VW | Premium 5lb Conductive Rubber Electrodes |
| PRF-912B | Miniature Concentric Ring |
| PRF-922B | Miniature 2-Point Probe |
| PRF-911 | Concentric Ring |
| PRS-800CS | Cable Spacers |
| PFA-860 | Footplate |
| PFA-861H | Hand-Held Electrode |
| PCF-825B | Glove CAFÉ Fixture |
| Q007B | Grounding Cube |
| PMK-151C | Hard Carrying Case |

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