



Features

- ✓ Fully automatic testing – Micro processor controlled
- ✓ Safe test – Dual Ground and Remote control
- ✓ Remote Control via PC application
- ✓ True DC – ripple free current
- ✓ Lightweight suitcase – withstands the impact of water, dust or sand
- ✓ Built in thermal printer
- ✓ Bluetooth enabled for Motware mobile application
- ✓ Pulsating DC Current
- ✓ Direct mV Drop Reading
- ✓ Dual Grounding Facility
- ✓ Calibration Due Indicator
- ✓ LED Indication for Mains/Battery/LOBAT
- ✓ Mains and Battery Operated

PCRMR 100S & PCRMR 200S

Contact Resistance Meter

| | | | | |
|--------|----|----|-----|-----------|
| CAT II | IP | CE | USB | Bluetooth |
| 300 | 67 | | | |

The Motwane's Digital Contact Resistance Meter, model PCRMR 100S & 200S is specially designed to measure extremely low resistances in micro ohm with high accuracy. The Instrument is based on Kelvin 4-wire connection method for measurement of low resistance. It conducts true DC ripple free current testing of bus bars, circuit breakers, User selectable current injection is 100A/200A. It has large LCD with backlight and display real time test information like injected current with measured resistance value & voltage drop. User friendly instrument and it comes with heavy duty cable with clamps for accurate measurement and accessories are housed in easy transportation This product is designed with safety, ease of use and versatility in mind. The lightweight and rugged suitcase design makes Motwane PCRMR an excellent choice when you need a portable solution in the field. When the case is closed, the product can withstand the impact of water, dust or sand – it even floats.

PCRMR has Bluetooth connectivity module with Motware mobile app for remote access of testing data & storage in the cloud for further analysis & record purpose.

Applications

Stationary and moving contacts are built from alloys that are formulated to endure the stresses of electrical arcing. However, if contacts are not maintained on a regular basis, their electrical resistance due to repeated arcing builds up, resulting in a significant decrease in the contact's ability to carry current and increase in resistance. Excessive corrosion of contacts is detrimental to the breaker performance.

Hence to check contacts is to apply DC and measure the contact resistance or voltage drop across the closed contacts. The use of a higher current value gives more reliable results than using lower current values. The resistance value is usually measured in micro ohms ($\mu\Omega$).

PCRMR 100S and 200S is specially used to measure static contact resistance of LV, HV, EHV circuit breaker contacts installed in energised switchyards. High accuracy and repeatability makes it a reliable tool for Quality Assurance and easy operation makes it a very handy tool for quick maintenance checks in various industries.

Typical resistance measurement applications are

- Circuit Breaker contact resistance
- Bus bar joints
- Isolator contacts
- Weld joints
- Bond resistance

Technical Details
PCRM 100S & 200S
Technical Specification

| | |
|---|---|
| Test Current(DC) | PCRM 100S: 100A PCRM 200S: 100/200A Selectable |
| Resistance Range | PCRM 100S: 0.1 $\mu\Omega$ – 2000 $\mu\Omega$ PCRM 200S: 0.1 $\mu\Omega$ to 20m Ω |
| Resolution | 0.1 $\mu\Omega$ |
| Accuracy | $\pm 2\%$ of the reading ± 5 digit (For 20 $\mu\Omega$) $\pm 2\%$ of the reading ± 1 digit (200 $\mu\Omega$,2000 $\mu\Omega$ & 2m Ω) |
| mV drop measurement | Yes |
| Open Circuit Voltage | 15V |
| Remote Control | Control the instrument remotely over USB via a PC or laptop for added safety |
| Bluetooth | For effective wireless communication. For download and asset tagging |
| Asset tagging | Running a Motware app on Windows tablet or smart phone to populate unique asset IDs for efficient asset management |
| Internal memory storage with USB download capability | For effective results management, up to 500 time and date stamped records. |
| IP Rating | IP 67 |
| Dual Ground | Using the optional DC clamp enables circuit breaker testing with ground protection in place for safety* with optional Clamp |
| Power Supply | |
| Mains/Battery Operated | |
| Mains Input Voltage | 115/230V, 50/60 Hz |
| Battery Type | Li-Ion Rechargeable Battery (14.8 V, 5.2 AH) |
| Battery charge time | ≤ 5 hrs |
| Battery backup | 8 to 10 hrs on a single charge |
| Operating Temperature | PCRM100S: -10°C to 55°C PCRM200S: 0°C to 50°C |
| Storage Temperature | 0°C to 50°C |
| Humidity | <95% R.H. non-condensing |
| EMC | IEC61326-1 |
| Safety | EN61010-1, EN 61326 |

| | |
|--|---|
| Printer | Thermal Printer |
| Dimension | PCRM100S: 365L mm x 465W mm x 185H mm PCRM200S : 188L mm X 395W mm X 504H mm |
| Gross Weight | PCRM 100S : 24 kg PCRM 200S : 28 kg |
| Large, Clear LCD | Custom Built 3½ LCD Display with Backlit |
| Ultra tough outer case construction | Designed for use in demanding environments instrument case Pelican 1520 (NF) |
| Keys to control the menu functions | Keypad membrane |
| Battery indication with status LED | Low Battery, Mains operation and battery charging & Battery level indication |
| Start/Stop key with status LED | Yes |
| Available languages | English |
| Protection Fuses | Mains protected fuse 3A/250V |
| Software Details | |
| Type | Windows based software |
| Interface | USB |
| Data Transfer | Real Time Data |
| Internal Data Storage | 500 Test results |
| Features | Remote Operation Data downloading Analysis and report generation |

Accessories
Standard

| | |
|---|----------|
| ■ 15-meter strong cable with C Clamp 75mm opening | : 1 Set. |
| ■ Master Earthing Cable with battery clip (5 meter) | : 1 No. |
| ■ Mains power cord | : 1 No. |
| ■ Mains Protected Fuse | : 2 Nos. |
| ■ User Manual | : 1 No. |
| ■ Carrying Case | : 1 No. |
| ■ Thermal Paper Role | : 1 No. |
| ■ USB Cable | : 1 No. |
| ■ Pen Drive | : 1 No. |
| ■ Test & Calibration Certificate | : 1 No. |

Technical Details

PCRM 100S & 200S

Optional

| | |
|---|---------|
| ■ 22-meter strong cable with C Clamp 50mm opening | : 1 Set |
| ■ 22-meter strong cable with C Clamp 100mm opening | : 1 Set |
| ■ 22-meter strong cable with C Clamp 150mm opening | : 1 Set |
| ■ 22-meter cable with Heavy Crocodile clip 25mm opening | : 1 Set |
| ■ 03-meter cable with Heavy Crocodile clip 25mm opening | : 1 Set |

Note

- Bluetooth Software (Optional)
- Motware Desktop Application (Optional)

ORDERING INFORMATION

| Product | Order Code |
|----------------------------------|------------------|
| PCRM 100S | 109209310 |
| PCRM 200S | 109211310 |
| with Standard Accessories | |

Note: Image & weight are subjected to change.