




PDRM-10A

10 AMP Micro-ohmmeter for resistance from 0.01 micro ohm to 200 ohms

The PDRM-10A micro-ohmmeter can be used to measure very low resistances which vary from 0,01 $\mu\Omega$ to 200 Ω . This is the most accurate on the market in its category.

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The PDRM-10A is suitable for both inplant maintenance and field. Resistance measurements are calculated automatically. This equipment has become the number one choice for industries, products engineers, and manufacturers. Recognized as the most accurate and easy to use on the market, the PDRM-10A is shock resistant and suitable for many applications.

Applications

Quality control of smelting parts.

- Control of mechanical joints and of joints welded at high voltage.
- Control of exothermic joints (Cadweld®).
- Control of electrodes for aluminum plants.
- Inspection of contacts, circuit breakers and power fuses.

Advantages of the PDRM-10A

Much lighter and handier than other equipment in its category.

- Shock resistant, it is suitable for all types of applications: work site or laboratory.
- Its back-lighting liquid crystal display (LCD) enables it to be used in dark areas.
- Weak current injection for applications that require small measurement contacts.
- A variety of probes adapted to types of specific measurements such as the inspection of exothermal welds. (Cadweld®), are available as options.

Technical specifications

Uses the four point measuring method.

- Automatic current adjustment from 5mA to 10A.
- Automatic stop mechanism of the instrument after 2 min. in idle mode.
- Automatic stop mechanism of the backlighting system after 30 sec.
- The LCD (Liquid Crystal Display) displays the results in letters that are easy to read.
- A set of standard connecting cables with "alligator" clips comes with the instrument.

Operation

The PDRM-10A uses a four-pin resistance measurement system which consists of injecting a current with two cables connected at each end of the joint to be tested. Then, the cables are installed which allow reading the tension on each side of the part to be tested in order to measure the resistance. This eliminates any uncertainty linked to resistance of the contacts. The instrument is equipped with a microprocessor which eliminates gaps and parasite voltages. Thanks to its unique filtering system, the PDRM-10A can be used in spite of the presence of intense magnetic fields.

Technical specifications

Measurement Range	0,01 $\mu\Omega$ to 200 Ω
Scales	20 $\mu\Omega$ to 200 Ω
Resolution	0.01 $\mu\Omega$
Running Temperatures	-20°C to +50°C (-4° F to 122° F)
Storage Temperatures	-40°C to +50°C (-40° F to 122° F)
Humidity	0 to 95% non condensed Submersible, rain proof
Autonomy	> 12 000 measurements, at 10A (for a cable loop resistivity < 50m Ω) > 10 000 measurements, for the other currents
Battery	Six (6) 1.2V, 2.1Ah rechargeable "A" NiMh batteries
Charger	12V 1A adapter with sealed connector, available for 110V or 220V
Display	Liquid crystal 128 X 64 dots, wide ranging temperatures 2.36 X 1.62 in. (60 X 41 mm) 2 back-lighting intensities (100%, 50%)
Size & Dimension	8 X 4.5 X 2 in. (203.3 X 114.3 X 50.8 mm)
Weight	1.9 lbs (0.86 kg)



Accuracy Table

Scales	Measure error	Scale Error		Common mode reject error (cable's impedance)	
200 Ω	0.1%	± 2 counts	0.02 Ω	-	-
20 Ω	0.1%	± 2 counts	0.002 Ω	-	-
2 Ω	0.1%	± 2 counts	0.0002 Ω	-	-
200 m Ω	0.1%	± 2 counts	0.02 m Ω	-	-
20 m Ω	0.1%	± 2 counts	0.002 m Ω	-	-
2 m Ω	0.1%	± 2 counts	0.0002 m Ω 0.20 $\mu\Omega$	-	-
200 $\mu\Omega$	0.1%	± 2 counts	0.02 $\mu\Omega$	± 2 counts 2	0.02 $\mu\Omega$
20 $\mu\Omega$	0.1%	± 2 counts	0.02 $\mu\Omega$	± 2 counts 2	0.02 $\mu\Omega$

Optional Equipment

Specific custom-made probes
Reference Resistance of 9,5 $\mu\Omega$
Nylon padded protection case
Transportation case