

Portable Digital Microhmmeter

DO7e



The DO7e is a very rugged yet compact and portable digital microhmmeter for the measurement of low resistance. Using a rechargeable sealed lead acid battery with built-in charger the DO7e is capable of measuring with a current of 10Amps on the lowest range.

The DO7e has been designed with the latest solid state and microprocessor techniques to ensure the very best in measurement reliability, and features. Automatic range selection, forward and reverse current measurements with auto average and a remote start socket are all included as well as an energy saving power down mode.

- ❖ True 4 terminal measurement eliminates lead resistance errors
- ❖ 10 amp measuring current
- ❖ rechargeable batteries with built-in charger
- ❖ Measuring range 6m Ω ...600 Ω
- ❖ Resolution 1.0 $\mu\Omega$ on 6m Ω range
- ❖ Auto and manual range selection
- ❖ Auto Power off for longer battery life

TECHNICAL DATA

The DO7e incorporates many advanced features, including protection up to 415Vrms at the measuring terminals, digital calibration and long scale length 6000 count. The DO7e is built into a rugged carrying case with rechargeable batteries giving real portability.

Six measuring ranges from 600 Ω to 6m Ω and the long scale length, 6000 count, will ensure high measurement resolution. Resistance down to 1 $\mu\Omega$ can be measured. The use of a high capacity sealed lead acid battery enables a measuring current of 10A on lowest measuring range.

The Battery charger is built in and the auto switch off circuits ensures the maximum battery life, with over 2000 measurements at 10A from a single charge.

Forward and reverse current measurements are available as well as the automatic average of the two readings, this ensures maximum accuracy and eliminates errors due thermal emf. The measuring ranges may be manually selected or the DO7e can be set to select the correct range automatically.

Range	Resolution	Typical Current	Uncertainty @ 20°C ±5°C 1 year	Temperature coefficient /°C
600 Ω	100m Ω	1mA	±(0.25%Rdg. +0.05% Rng.	40ppm rdg ± 30ppm FS
60 Ω	10m Ω	10mA	±(0.25%Rdg. +0.05% Rng.	40ppm rdg ± 30ppm FS
6 Ω	1m Ω	100mA	±(0.25%Rdg. +0.05% Rng.	40ppm rdg ± 30ppm FS
600m Ω	100 $\mu\Omega$	1A	±(0.25%Rdg. +0.05% Rng.	40ppm rdg ± 30ppm FS
60m Ω	10 $\mu\Omega$	1A	±(0.25%Rdg. +0.05% Rng.	40ppm rdg ± 30ppm FS
6m Ω	1 $\mu\Omega$	10A	±(0.25%Rdg. +0.05% Rng.	40ppm rdg ±250ppm FS

Measurement

Four terminal Kelvin/Thomson principle eliminates errors due to lead resistance

Display

0.8" LED 6000 count with automatic decimal point and polarity indication

Ranges

6 ranges, with manual or automatic range selection. LED indication

Average

Automatic average and display of measurement with forward and reverse current.

Calibration

Digital Pass code protected

Protection

415Vrms maximum at the measuring terminals will blow internal protection fuse

Battery

Sealed lead acid battery with built-in charger. Greater than 1000 measurements on lowest (10A range) and 20 hours on other ranges from a fully charged battery

Terminals

Binding posts accept 4mm spade tags, 6mm bare wires and 4mm banana plugs (4mm safety sockets)

Working Temperature

0...40°C rel. humidity 80% max. non condensing

Storage Temperature

-20...+50°C

Mains Supply

115/230 Volts +10%-10%
47...63Hz 20VA

Safety

EN61010-1
EMC - EN61236

Dimensions

343 x 327 x 152mm (W H D)

Mass

6 kg approx.

Accessories

Supplied complete with mains cord, measuring leads with Kelvin clips, operating handbook and calibration certificate



IET LABS, INC.

534 Main Street, Westbury, NY 11590

Tel (516) 334-5959 (800) 899-8438

Fax (516) 334-5988 <http://www.ietlabs.com>