

# DO7Plus

## Rugged digital micro ohmmeter for low resistance measurement, with built-in temperature compensation

The DO7Plus is a 10A micro ohmmeter, suitable for applications within aerospace, utilities, cable or machine manufacturers, or where a cooling curve is required to plot peak resistance. Sealed in an IP67 case (lid closed, or IP53, lid open) it is ruggedly constructed to ensure durability.

The DO7Plus has a backlit LCD graphics panel, full QWERTY keyboard, temperature compensation via optional Pt100 probe, and built in coefficients for Copper and Aluminium as well as user defined. Full cooling curve facilities are built in, with real time graphical plotting on the LCD. Data log memory contents can be plotted and a curve fitted to calculate the peak resistance value when  $t=0$ .

The unit has a display length of 60,000 counts and auto averaging of forward and reverse measurement removes thermal emf differences. Connectivity is improved with both USB and RS232 for data downloading. The internal memory holds up to 1,000 date and time stamped readings, which can be viewed on the LCD or downloaded with the free software provided, as CSV file to a PC for further analysis.

The data log memory using the latest FRAM technology which offers unlimited read/write cycles and over 10 years of data retention, without relying on internal batteries.

The unit has built in rechargeable batteries which will provide up to 1 hour of use at 10A, and up to 20 hours at all other ranges.



### Key Features

- On-screen, real-time graphical plotting cooling curve facilities with peak resistance value calculator
- Reading rate of 2 readings per second
- Measuring ranges from  $6\text{m}\Omega$  -  $6\text{k}\Omega$
- Resolution  $100\text{n}\Omega$  on  $6\text{m}\Omega$  range
- Backlit LCD graphic panel with programmable timer for battery conservation
- Single pulse measurement for fast resistance tests
- Continuous measurement current for inductive tests
- Full test lead continuity testing and diagnostic display
- Multilingual - display available in English, French, German, Spanish or Italian
- RS-232 and USB interfaces

### Ideal For

- Automotive
- Aerospace
- Cable manufacturers/distributors
- Military
- Manufacturing
- Utilities; electrical, water and gas

[www.seaward.co.uk/DO7Plus](http://www.seaward.co.uk/DO7Plus)

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## Technical Specifications

Range	Current	Resolution	FSV	Uncertainty
6.0000mΩ	10A	100nΩ	60mV	±(0.05% Rdg +0.01% FS)
60.000mΩ	1A	1μΩ	60mV	±(0.05% Rdg +0.01% FS)
600.00mΩ	100mA	10μΩ	60mV	±(0.05% Rdg +0.01% FS)
6.0000Ω	10mA	100μΩ	60mV	± (0.05% Rdg +0.01% FS)
60.000Ω	1mA	1mΩ	60mV	± (0.05% Rdg +0.01% FS)
600.00Ω	100μA	10mΩ	60mV	± (0.05% Rdg +0.01% FS)
6.0000 kΩ	100μA	100mΩ	600mV	± (0.05% Rdg +0.01% FS)

### Measurement

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

### Display

60,000 count + sign LCD graphics panel with backlight.  
Select display value of °C or °F

### Ranges

7 resistance ranges

### Terminals

4mm safety sockets

### Safety

Conforms to EN 61010-1:2001 50V Cat 3

### Calibration

Digital password protected, manual or via remote interface

### Battery

Internal, fixed NiMH battery pack, gas gauge circuits to monitor battery capacity. Internal automatic FAST/TRICKLE battery Charger. DC input from 9 – 36V

### Mains Supply

External mains psu 90 – 253V, 47 – 63Hz with interchangeable plugs

## General Specifications

### DO7 Plus Optional Accessories

Code	Item	Part Number
LS05	Lead set with 4 x 1m leads terminated in banana plugs, 4 x crocodile clips, 4 x test probes and 2 x Kelvin clips type KC1	190004
LS03-P	Lead set with 3m leads and terminated with large Kelvin clips type KC3	190045
LS04-P	Lead set with 3 and 15m lead length, terminated in large Kelvin clips type KC3	190049
HS01-P	2 x Duplex handspike with 3m lead length	190077
HS02-P	Duplex handspikes with 3 and 15m lead length	190057
CH01	Kelvin test probe (set of two)	930108
MTS2	Calibration Standard Note: Lead sets can be supplied in different lengths to order	930241
C02	1m cable clamp with metal base for the precise measurement of 1m cable samples 0.1-100mm <sup>2</sup>	930150
CO2A	1m cable clamp with metal base for the precise measurement of 1m cable samples 1-1000mm <sup>2</sup>	930214
C03	1m cable clamp with water bath for the precise measurement of 1m cable samples 1-1000mm <sup>2</sup>	930419
Pt02-DO7	Pt100 temperature probe with 1m lead	551A950

### Dimensions

358 x 269 x 155mm / 14 x 11 x 6.1" (w x h x d)

### Mass

6kg / 14lbs (instrument only)

### Working Temperature

0 to 40°C

### Storage Temperature

-20 to +50°C

### Services

1 year warranty (subject to product registration with Seaward.  
Visit [www.seaward.co.uk/register-product](http://www.seaward.co.uk/register-product))

Service and calibration by Calibrationhouse.

Go to [www.calibrationhouse.com](http://www.calibrationhouse.com) for more information

### Part Number

551A910