

# Model 5898

## Portable 200A Precision Micro-Ohmmeter

Precision Instruments



An accurate mains/battery powered portable 200A Micro ohmmeter. Using the 4 terminal measurement technique the Tinsley 5898 gives a basic accuracy of 0.2% and an overall resistance range of 0.1 $\mu$ ohm to 6ohms.

With an internal mains re-chargeable battery supply the Tinsley 5898 may be used "in the field" for periods of up to 8 hours without requiring recharging. A standard RS232 computer interface is included that may be used for printing resistance values or down loading measurements that have been stored in the instruments memory. The Tinsley 5898 can be used fully auto-ranging or with manual range selection if required. Each range has a choice of high or low measuring current, with the exception of the lowest range, which is fixed at 200 Amps. Current can be selected to be positive or negative, with the option of automatic reversal to eliminate the effect of thermal EMF's.

**Tinsley**  
Precision Instruments

**Specification**

| Range  | Resolution | Current    | Accuracy<br>% reading + last digits | Temperature coefficient<br>(% reading + last digit)/°C |
|--------|------------|------------|-------------------------------------|--------------------------------------------------------|
| 600μΩ  | 0.1μΩ      | 200A/50A   | ±0.4% +6                            | (0.04% + 0.2)/°C                                       |
| 6000μΩ | 1.0μΩ      | 200A/50A   | ±0.2% +6                            | (0.02% + 0.1)/°C                                       |
| 60mΩ   | 10μΩ       | 20A/5A     | ±0.2% +6                            | (0.02% + 0.1)/°C                                       |
| 600mΩ  | 0.1mΩ      | 2A/0.5A    | ±0.2% +6                            | (0.02% + 0.1)/°C                                       |
| 6Ω     | 1.0mΩ      | 200mA/50mA | ±0.4% +6                            | (0.04% + 0.2)/°C                                       |

**Control functions**

5 measuring range controls (manual selection)

AUTO key for auto range

High/Low current control

3 current direction measurement controls:

+ direction

- direction

Alternate (automatic reversal of + and - to eliminate thermal e.m.f. errors in measuring circuit)

Supply ON/OFF

Measure key

Print key

Calibration (CAL) control. Enables instrument internal reference standards to be calibrated by applying a set of external reference standards

Menu/Enter key to access additional functions

Time and date

Print mode

Baud rate

Data logging mode

RS232 for data and printer output

4 large 200A rated input terminals

Mains input charging socket

2 battery charge indicators

**Measurement principle**

A four terminal measurement principle to eliminate lead resistance

The 200A current is pulsed with a duty cycle of approximately 10%. Measurement value displayed continuously



Model 5898

**Power supplies**

Two internal, re-chargeable, sealed, lead acid batteries are fitted for external 200A test resistance current and internal measurement supply circuits

Two charge indicators show the state of charge

The built-in battery charger has a front panel mains input supply for 115v or 230V supply with fuses

**Digital display**

A 4 digit 6000 count display provides resolution to 0.015% of full scale reading in a bright daylight viewing 20mm high LED display

**Mechanical**

A rugged, portable sealed ABS case, coloured grey

Size 46x38x16cms

Nett weight approx 20Kg

**Calibration**

Provided with an in-house Tinsley Calibration Certificate traceable to National Standards via NPL



0057



**Tinsley**  
Precision Instruments

275 King Henry's Drive, New Addington, Croydon, CR0 0AE, England  
Telephone 44 (0) 1689 800799 Fax 44 (0) 1689 800405