

Application Note

The 1880 Specified Accuracy and Constant Current Ranges

The 1880 Milliohmmeter resistance accuracy is specified as in Table 1. Figures 1 and 2 display this accuracy in graphical form.

Table 1: 1880 Resistance Accuracy

Resistance Range	Resolution	Accuracy*	Test	Clamp
(Full Scale)		(* 18°C - 28°C)	Current	Voltage
$20 \mathrm{m}\Omega$	1μΩ	$\pm (0.1\% + 1ct)$	1A	1.0V
200mΩ	10μΩ	$\pm (0.05\% + 1ct)$	100mA	1.0V
2Ω	100μΩ	$\pm (0.05\% + 1ct)$	100mA	1.0V
20Ω	$1 \text{m}\Omega$	$\pm (0.05\% + 1ct)$	10mA	1.0V
200Ω	10 m Ω	$\pm (0.05\% + 1ct)$	1mA	4.5V
2kΩ	100mΩ	$\pm (0.05\% + 1ct)$	100μΑ	4.5V
20kΩ	1Ω	$\pm (0.05\% + 1ct)$	100μΑ	4.5V
200kΩ	10Ω	$\pm (0.05\% + 1ct)$	10μΑ	4.5V
2ΜΩ	100Ω	$\pm (0.05\% + 1ct)$	1μA	4.5V

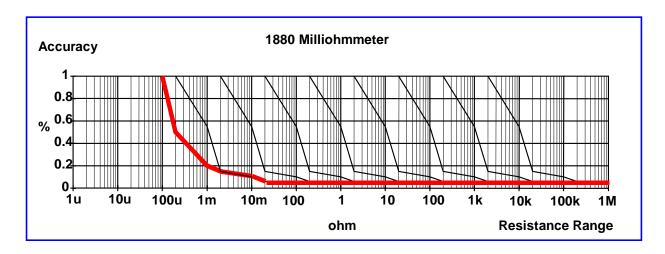


Figure 1: Range Accuracy

CONSTANT CURRENT

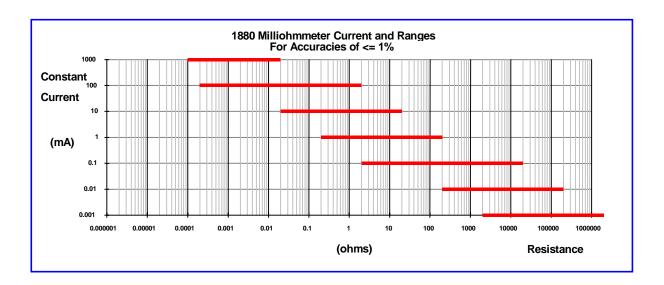


Figure 2: Constant Current versus Resistance Range

The 1880 Milliohmmeter is an economical and highly accurate production tester. Nine measurement ranges selected manually or automatically provide wide coverage between $2M\Omega$ and $1\mu\Omega$ with constant current between $1\mu A$ and 1A. The 1880 instrument includes an I/O interface for automated testing. An optional IEEE-488 interface enables the 1880 unit to be computer controlled and the test data logged. The 4-terminal Kelvin connection and auto zero function aid in removing any stray resistance and provide very accurate low resistance measurements.

For complete product specifications on the 1880 Milliohmmeter or any of QuadTech's products, visit us at http://www.quadtech.com/resources/dataindex.html. Do you have an application specific testing need? Call us at 1-800-253-1230 or email applications at jkramer@quadtech.com and we'll work with you on a custom solution. Put QuadTech to the test because we're committed to solving your testing requirements.

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