

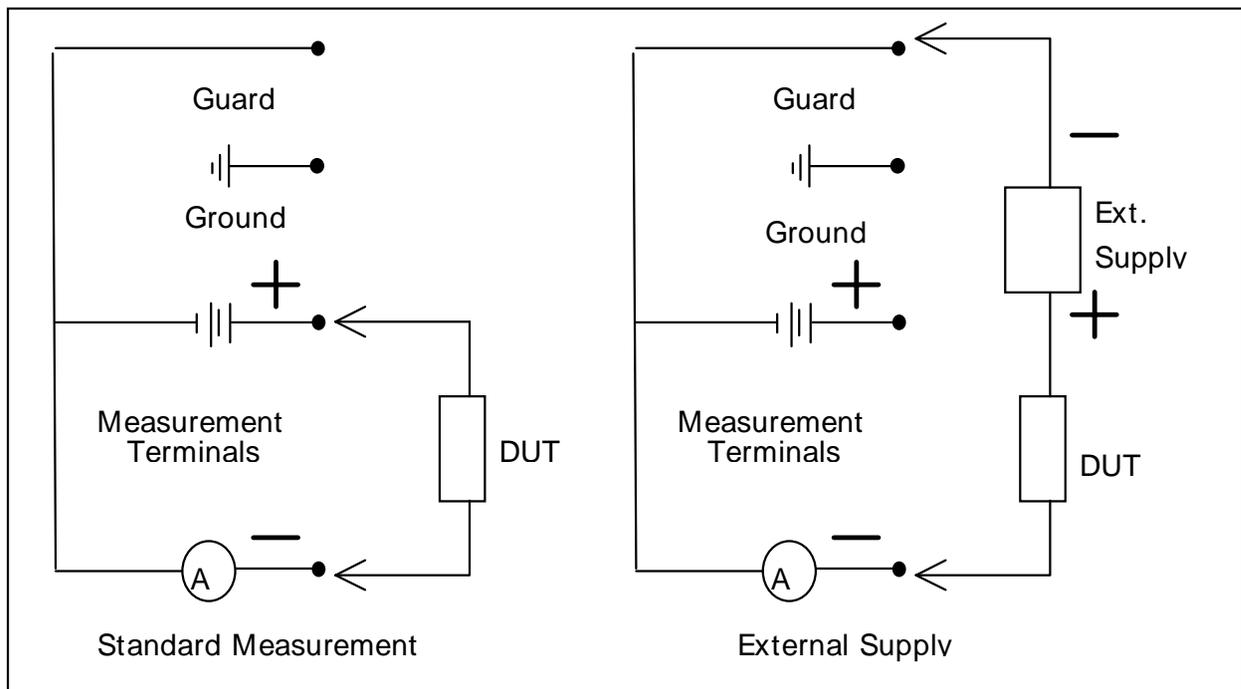


Application Note

The QuadTech 1865 as a Current Meter

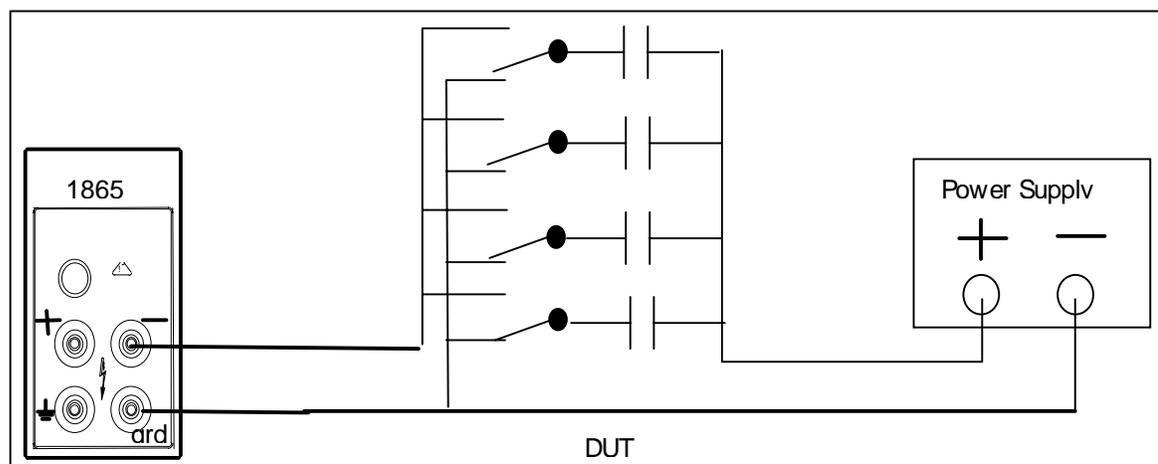
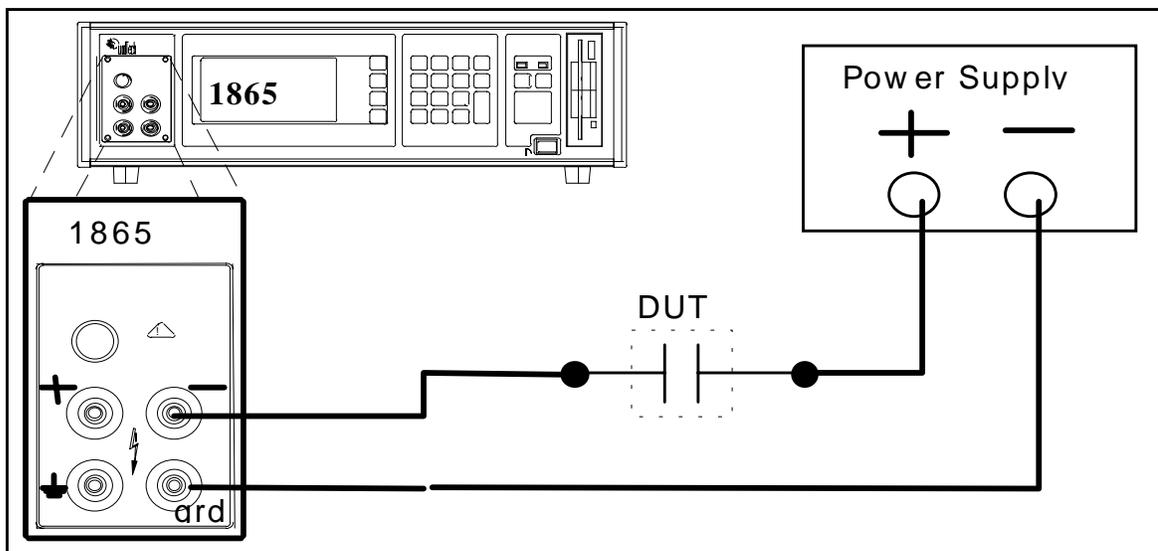
The 1865 Megohmmeter / IR Meter consists (as all megohmmeters do) of a voltage source and a current meter. The 1865, being a state of the art instrument, allows for selection of the display of current or resistance rather than just the display of resistance. This means that it is

possible to use the instrument as a precision uA meter even when the voltage source is other than the internal voltage supply. The figure below demonstrates the two methods of connecting to the 1865 to a voltage supply.



Using the internal supply is the normal mode for measuring leakage current of any device or material. Using an external supply becomes useful for measuring leakage of capacitors. This method allows the use of power supplies with higher current and voltage than is available from the 1865. The External method is also

used when the current is generated from the DUT itself. As an example, some nuclear probes generate small currents and this is a good method to measure the current or to calibrate the probes.



Example Applications

For safety reasons, the 1865 power supply is limited to 2 mA and 1000 V. When measuring the leakage of capacitor these limitation create a very long charge time and therefore a long measurement time. By using an external supply, the charge current or voltage can be

increased to reach a charged condition much more rapidly.

NOTE: If this approach is used, great care should be taken in ascertaining the safety of the operator.

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Printed in U.S.A.

PN 035031

July, 1999