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Using the Secondary Measurement Function of a DM3058 DMM

The Rigol DM3058 family of DMMs are easy-to-use benchtop instruments that include a number of time-saving features. One of those is the secondary measurement function. Normally, the instrument is configured to measure a single parameter at a time; DC voltage, for example. But, in many cases, the situation may require also taking another measurement. This could require reconfiguring the wiring and the instrument. This increases the complexity and the amount of time required to take the measurement.

Using the secondary measurement function, the DM3058 can display two measurements simultaneously. The available secondary measurements are shown in grey in *Figure 1* below:

		Main Display Function								
		DCV	DCI	ACV	ACI	FREQ	PERIOD	2WR	4WR	Cap
Secondary Display Function	DCV									
	DCI									
	ACV									
	ACI									
	FREQ									
	PERIOD									
	2WR									
	4WR									
	Cap									

Figure 1: Chart showing Main and Secondary Measurements available with the DM3058 series of DMM.

The grey boxes denote valid measurement selections.

Once we have configured the wiring and instrument properly, we can use this secondary measurement function to quickly obtain two parameters at once.

In this note, we are going to demonstrate how to measure DCV and DCI using the secondary measurement function.

Setup

First, configure the instrument for the proper main measurement that you wish to make. In this case, we are going to measure DCV.



Next, connect the device-under-test (DUT) to the DMM. Wiring is critical to performing this measurement correctly.

- Connect the DMM V_{hi} on the high side of the input voltage
- Connect the DMM I_{hi} on the low side of the resistance you are measuring
- Connect the DMM V_{lo}/I_{lo}

This is shown in *Figure 1* below:

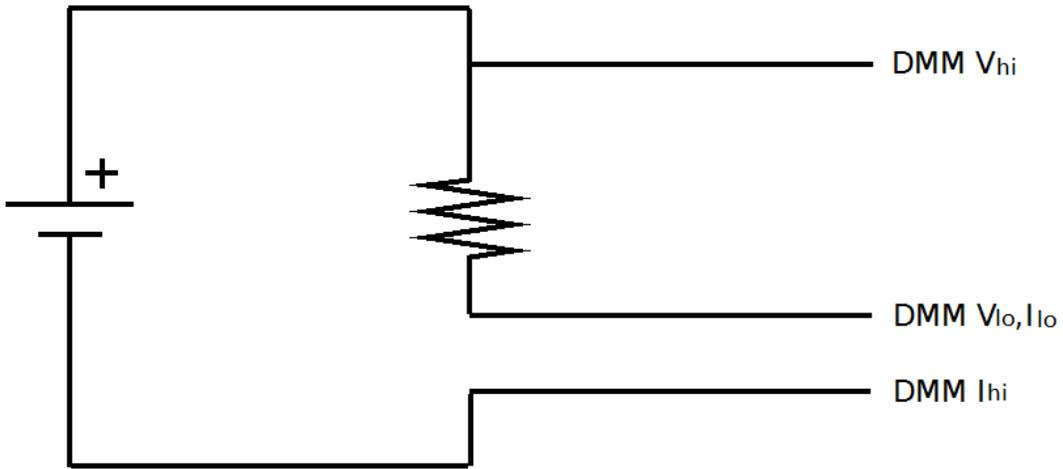


Figure 1: Proper connection for measuring DCV and DCI with a DM3058 Multimeter.

To activate the second function, press the second function key:



Then, press the function (DCI) that you wish to measure:



The display will now show both the DCV and DCI measurements:



Find more information online [DM3058 Family Information page](#)

For more information on our waveform generators or other products please go to rigolna.com or contact us directly at applications@rigoltech.com or call us toll free at 877-4-RIGOL-1.

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