

MEGOHMMETERS – FIELD VERIFICATION WITH DMM

When using a megohmmeter, you may wonder if the instrument is operating correctly and measuring accurately.

To quickly verify that your megohmmeter is measuring reliably, you can connect it to a DMM (Digital Multimeter) to confirm the megohmmeter's proper DC output voltage and measurement.

The following steps will explain how to measure the output voltage of a megohmmeter and validate that the megohmmeter can measure 10 MΩ, which is the typical input impedance of voltage inputs on most commercially available handheld multimeters.

Equipment Needed:

- Megohmmeter with test leads (**AEMC Model 6529, Catalog # 2126.55** in this example)
- DMM with test leads (**AEMC Model 5217, Catalog # 2154.09** in this example)

In this example, we will use an **AEMC Model 6529** megohmmeter and set it to the 500 V test voltage mode for insulation resistance. We will connect the megohmmeter to an **AEMC Model 5217** DMM.

IMPORTANT NOTE!

You must ensure that you set the megohmmeter to output a voltage that does not exceed the DMM's DC voltage capability. Take notice of the highest DC voltage your DMM can safely measure. Not all DMMs can measure the same DC ranges.

Connect the test leads from the megohmmeter to the DMM.

1. Megohmmeter **+** output to DMM **+** voltage input. Megohmmeter **■** output to DMM **COM** input.
2. Set the megohmmeter to output **500 V** (or any voltage less than the max DMM DC voltage range).

3. Set the DMM to accept DC voltage. See the pictures below for correct lead connections and meters' setup.



4. Press and hold **TEST** on the megohmmeter to output voltage and start testing.

5. Observe **>500 V** reading on the DMM (558.5 V_{DC} in this case).

6. Observe **10 M Ω** reading on the megohmmeter.

7. Release **TEST** on megohmmeter.



If you have any questions, contact AEMC® Technical Support at 1-800-343-1391 x351 or email techsupport@aemc.com.

Please visit and subscribe to our YouTube™ channel for informative videos on our products and software.

www.youtube.com/user/AEMCinstruments

