Adafruit 3624 Mini Power Meter with Voltage, Current, Watts, mAh & mWh Display

A waste of STEM money?

School districts and teachers should wait for Adafruit comments and corrections, but so far, our hands-on tests of two separately purchased 3624 Electric Energy Meters at $24.95 each suggest a worse-than-useless investment.

Though “Engineered in NYC” but obviously manufactured (and, worse, “explained”!) in China this tester did not measure voltage consistently or correctly. The “bottom line” is a very frustrating and discouraging “learning experience” for STEM students of any age!

Since indicated POWER depends both on accurate CURRENT and VOLTAGE measurements, as an energy meter for small STEM (especially solar) projects the result is highly inconsistent data and conclusions! Nor does Adafruit's Chinese specification sheet compare or contrast “range,” “precision” and "accuracy."

Adafruit’s video shows the meter in use with a nominal (and safe) “5-volt” project. Nor does the voltage measured in the video vary appreciably (at the tenths decimal place) from a reasonable 5.2 volts.

We could not duplicate these stable voltage readings!

Even with a very well-regulated 20-volt source (Heath 2762 DC Power Supply) and powering the Adafruit 3624 independently with 6 volts through the optional connector displayed voltages fluctuated second-by-second between 22.8 and 16.8 volts! (For comparison – and simultaneously – an Extech 380942 meter indicated a steady 20.1 volts both “in” and “out”.)

Photos (including Adafruit’s video) – to be followed with drawings for our final review – are available for comment now at:

http://educationtechnologyreview.com/adafruit/

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