



VEBKO ONLINE HELP

“Offload” Test Part 2

Category	tester
Section	AMT Transducer Module
Language	English
Generated	2026-10-18

In addition to the tests that the user can perform by specifying different points on the energy meter characteristic, in the offload section, 5 other tests available in this section are as follows:

-Load Test

-Mechanism Test

-Injection Test

-No-Load Test

-Creep Test

As mentioned in the first part, before performing any of the tests, we enter the information about the energy meter in the Test Object section. First, enter the CT and PT conversion ratio data, and then, in the Transducer Properties section, enter the meter constant. After confirming the entered information, select the test from the Test Mode to be performed and after adding the points, run the test.

Load Test

In this section, the voltage injection and current for a specific time is set to evaluate the number of pulses. Finally, the overall energy performance of the meter can be checked. The purpose of this test is to evaluate the error rate for measuring different elements in the meter.

To execute the test, first go to the Advanced View section, here we need to adjust the active power in the supported range of energy meter. Then, we add three points with 5, 10, 15 pulses to run the test, and we run the test. As you can see in the Test Point section, information about watt-hour, pulses, test duration and time and its frequency can be set.

Mechanism Test

In this section, the injection of rated current and rated voltage is done for a certain period of time to evaluate the amount of transmission energy. The purpose of this test, in addition to evaluating the error rate in the overall measurement, is to evaluate the error rate of the device in measuring various elements. Since the number of pulses is not important, points can be entered for testing based on watt-hour and time elements. The evaluation conditions of this test are based on the use of the Open Loop feature so that at the end of the test, the user can enter the measured value manually.

Injection test

In this test, voltage and current are continuously injected to ensure the accuracy of the wiring as well as the initial function of the meter. Adjustable elements in the Test Point section for this test are: watt-hour, pulses, test duration and time, and frequency. To perform the test, add a dot and run the test.

No-Load Test

The focus of this test is injecting 150% of the rated voltage and zero current; to check the performance or non-performance of the meter. The relationship between the minimum test duration is specified as follows:

$$\Delta t = \frac{480 \times 10^6}{R \times P_{\max}} (\text{sec})$$

$$R = \text{Pulses} \setminus \text{kwh}$$

Figure 1

In this test, to achieve 150% of the rated voltage, the voltage limit should be changed from the Test Object section, if necessary. Then, the test should be performed by setting the voltage to 150% of the rated voltage. As you can see, there is no current injection in this section.

Creep Test

Injecting 0.5% of the rated current with the rated voltage is performed in this section to check the performance or non-performance of the meter. In this section, you can also add points to perform the test based on the amount of watt-hour, pulse or duration. After each test, you can view the results in the Report window by selecting the Report View option.

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