

Micro Motion[®] Modbus Interface Tool

SMART Meter Verification

SMV 1 Overview

SMART Meter Verification is a Micro Motion diagnostic tool that allows you to compare the sensor's current performance to benchmark data established at the factory.

Using the Modbus interface, you can:

- Execute a SMART Meter Verification test from the Modbus host
- Set up scheduled test execution
- Read result data for the twenty test results stored on the transmitter

SMART Meter Verification is the enhanced version of Meter Verification.

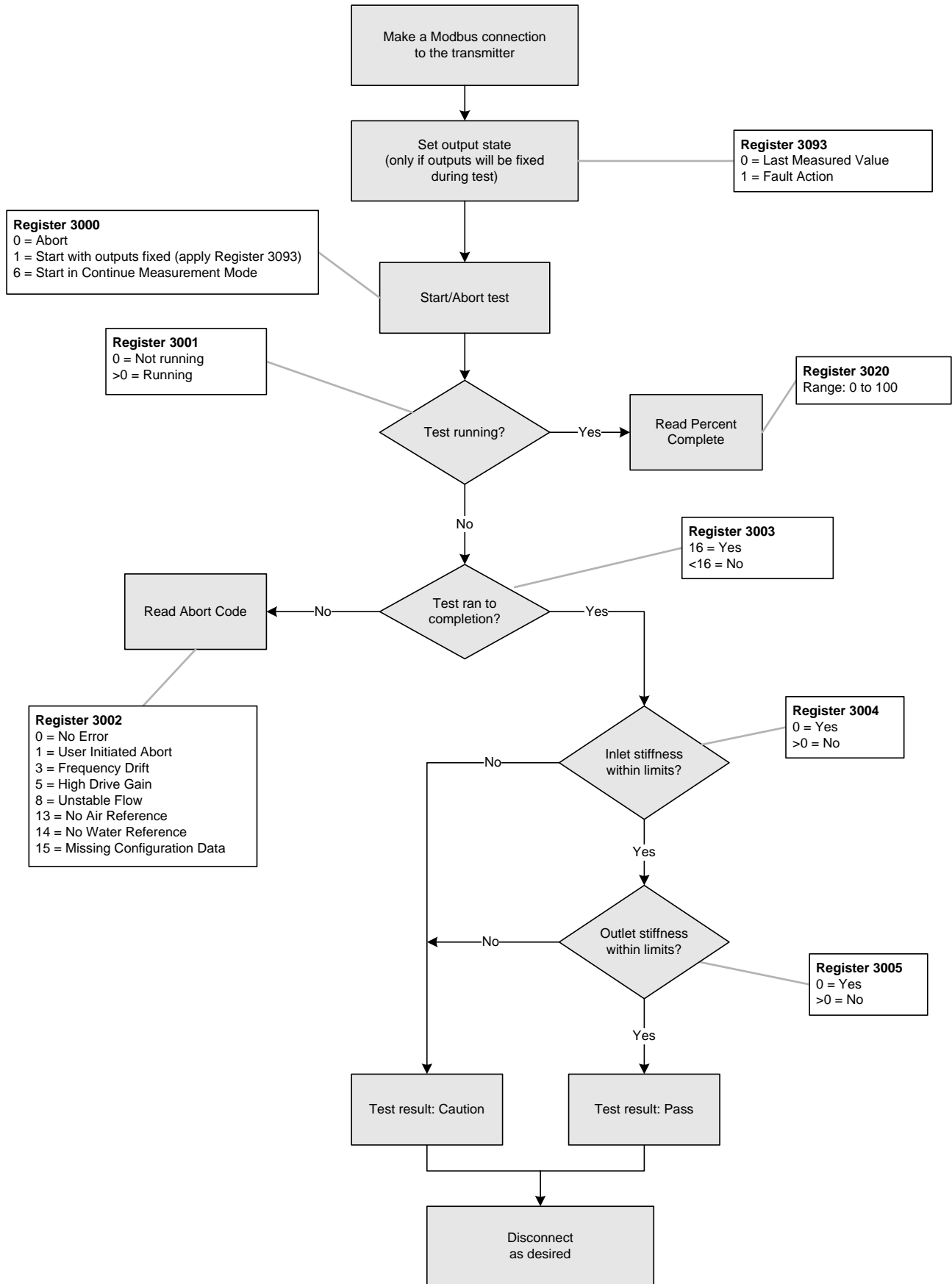
For more information on requirements and features, see your transmitter manual.

SMV 2 Execute a SMART Meter Verification test from the Modbus host

For this procedure, the Modbus host must be connected to the transmitter.

See the flowchart in Figure SMV-1.

Figure SMV-1 SMART Meter Verification test procedure



SMV 3 Set up scheduled test execution

The Modbus host is used to set up the schedule, and must be connected to the transmitter for these tasks. Once the schedule is loaded into the transmitter, the tests are initiated by the transmitter and the Modbus host does not have to be connected.

You can schedule test execution in the following two ways:

- Schedule a single execution
- Schedule recurring execution

To schedule a single execution:

1. Make a Modbus connection to the transmitter.
2. Write a floating-point value to Register 2993. This value specifies the number of hours until test execution.
3. Disconnect as desired.

To schedule recurring execution:

1. Make a Modbus connection to the transmitter.
2. Write a floating-point value to Register 2993. This value specifies the number of hours until the first test will be executed.
3. Write a floating-point value to Register 2995. This value specifies the number of hours between test executions.
4. Disconnect as desired.

To read the number of hours until the next execution:

1. Make a Modbus connection to the transmitter.
2. Read Register 2997.
3. Disconnect as desired.

To cancel scheduled execution:

1. Make a Modbus connection to the transmitter.
2. Write **0** to Register 2993.
3. Write **0** to Register 2995.
4. Disconnect as desired.

SMV 4 Read stored test results

The results of the twenty most recent tests are stored on the transmitter. To read a test result:

1. Make a Modbus connection to the transmitter.
2. Specify the test record to read by writing a value between 0 and 19 to Register 2984. (0 = the most recent test; 19 = oldest test.)
3. Read any of the registers listed in Table SMV-1.

Table SMV-1 Modbus registers for test results

Register	Contents
2985	Test number
2986 Bit #7	Test result <ul style="list-style-type: none">• 0 = Pass• 1 = Caution
2986 Bits #6–4	State
2986 Bits #3–0	Abort code (compressed)
2987	Time initiated
2989	Inlet normalized data
2991	Outlet normalized data

4. Disconnect as desired.

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