# SOFTWARE

MODBUSVIEW™

PC-Based Software Tool

HIGHLIGHTS

- Software establishes remote read/write Modbus serial communication interface with Fox Thermal flow meter models FT1, FT4A, and FT4X.

- View flow meter data and configure programmable settings.

- Access Gas-SelectX® to update the programmed gas mixture or switch between common gases like air, natural gas, methane, hydrogen, carbon dioxide, and more.

- Operate the flow meters' calibration validation diagnostic, CAL-V™, and create certificates of validation.

- FT4X only: Read and save logs of 24-hour daily totals, meter events/alarms, and CAL-V™ diagnostics for audit trail.

- Software connects using the meter's RS485 Modbus RTU digital communications option.

- Alternatively connect using Modbus TCP/IP over ethernet using a compatible Modbus RTU serial to TCP/IP converter.

FOX® THERMAL

OIL & GAS | INDUSTRIAL | BIOGAS | WASTEWATER
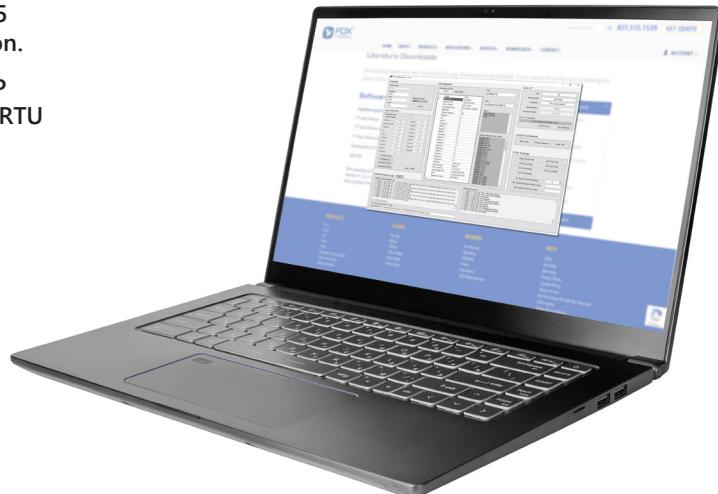
ModbusView

METER ACCESSIBILITY

Fox Thermal has developed advanced software — ModbusView™ — a PC-compatible application available for licensing and downloading from Fox Thermal. Connect your laptop, PC, or control station to the meter using Modbus serial communication interface to access the meter's data and configure the meter's settings.
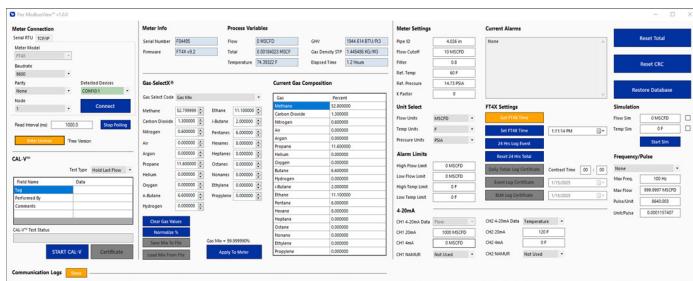
*Flow meter interface on ModbusView screen.*

ModbusView™ provides:

- Quick access to configuration parameters and available gas selections
- Selection of measurement units, flow and temperature ranges, alarm settings and more
- View or print a CAL-V™ Calibration Validation certificate
- Display of alarm codes
- Storage of Gas-SelectX® mixes to a file that can be archived and loaded into the meter
- Raw data to be viewed in order to diagnose or troubleshoot your meter
- View flow, temperature and total measurements, gross heating value and density of gas mix
- Flow and temperature simulation
- Data logging settings and certificates for FT4X flow meters

CAL-V™ ACCESS

Validate the calibration of the flow meter in the field using the CAL-V™ test. The goal of calibration validation is to provide operators with the ability to verify that the meter is capturing accurate data at scheduled recalibration times — or at any time — instead of sending the meter back to the factory for recalibration. This test can be done in the pipe under normal process conditions.

Using Modbus to perform the CAL-V test is equivalent to running the test through the front panel of the flow meter. Although a CAL-V calibration validation certificate can also be generated when using ModbusView to run the test with flow meters programmed to firmware version v8.3 or higher.
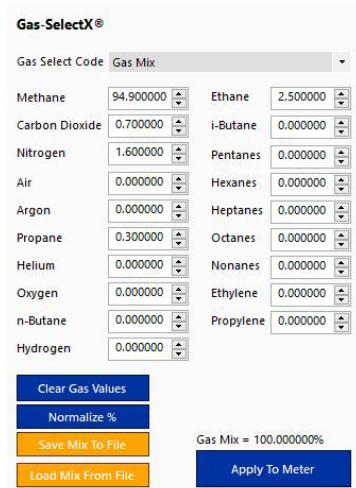
Enter molar percentage of constituent gases in 0.000001% increments to create a custom gas mix.

GAS-SELECTX® ACCESS

The Gas-SelectX® feature is available on models FT1, FT4A, and FT4X flow meters. It allows the user to select pure gases or create custom gas mixes in menus easily accessed from the ModbusView™ software.

When the user changes the selected gas or gas mixture, the firmware automatically applies high-precision algorithms to ensure flow measurement accuracy is maintained. The Gas-SelectX® feature makes the FT1, FT4A, and FT4X the only thermal mass flow meters that can be reconfigured in the field and still maintain factory-specified accuracy. This is a great alternative to removing the instrument for a factory recalibration or estimating a correction factor.

MODBUS TCP/IP COMMUNICATION

ModbusView can also interface with your flow meter through Modbus TCP/IP over ethernet when using a compatible Modbus RTU serial to TCP/IP converter. The FT1, FT4A and FT4X meters communicate through serial Modbus RTU and require the converter to interface with Modbus TCP/IP. This setup allows the meter to be accessed across standard networking equipment using TCP/IP.
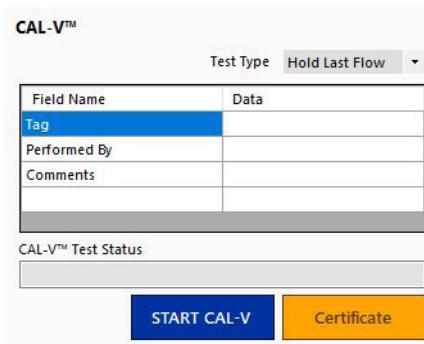
Enter identifying information in the CAL-V™ window and run the test. A pass/fail status will be produced and a certificate can be printed upon completion.