

## **Model FT4A Flow meter Troubleshooting Guide**

### **Fox Thermal Instruments**

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This document has been created to assist Fox's technical service staff to resolve flow meter problems. Your assistance to provide complete details is appreciated.

#### **Section A: General information:**

1. What is the serial number and model number of the flow meter?
2. Please describe the problems in detail.
3. Approximately when did the problem start? Did the flow meter ever work properly or has the problem existed since the initial installation?

#### **Section B: Troubleshooting:**

4. If applicable, please provide all alarm codes shown on the display. You can also read the alarms using a PC and Fox's FT4A View™ software. Please visit the following URL to download FT4A View:  
<https://foxthermalinstruments.com/products/pdf/ft4a/ft4a-view-setup.exe>
5. What is the measured input power to the flow meter at terminal TS1?
6. Test/Check fuses and LED status lights for FT4A.
  - With the power off, take a resistance measurement across the fuse to ensure it is a short circuit.
  - Is the LP3 LED on main board blinking once per second?
7. Have any of the flow meter settings been changed since you received the meter from Fox?

Link to the Fox model FT4A Instruction Manual located on the "Downloads" tab of the FT4A Product Webpage:  
<https://foxthermalinstruments.com/products/pdf/ft4a/ft4a-manual.pdf>

#### **Section C: Investigating flow meter inaccuracy:**

8. How high or low is the flow meter reading and at what flow rate? Please provide specific data.
9. Are the readings taken from the flow meter display or from the customer's system (PLC or DCS)? The 4mA and 20mA scaling in the PLC or DCS must match the flow meters settings. If you are using the 4 to 20 mA output also confirm that the measurement unit (SCFM, KG/HR, NM3H, etc.) in the Fox meter is the same as in your PLC/DCS.
10. Did the meter ever read accurately or do you believe it has read in error since it was installed?
11. If measuring a gas mixture, have you checked to be sure that the mixture parts equal 100%? If not, what gas are you currently measuring? Does the gas mixture in Gas Select-X match your current gas analysis?
12. Has there been any change in meter location or pipe configuration?

13. Is the insertion depth setting in accordance with Fox performance specifications?
14. What is the inside diameter (ID) of the pipe? Is the actual pipe ID the same as listed on the Calibration Certificate? If not, does the meters programmed pipe ID match the actual pipe ID?
15. Compare the STP (Standard Temperature and Pressure) settings (values and units) in the meter with the information recorded on the calibration certificate. Do the settings match? This is a requirement for accurate measurement. What are the values for the STP parameters?
16. How much straight pipe is upstream and downstream of the flow meter? Fox recommends a minimum of 15 diameters of straight pipe upstream of the flow meter and 10 diameters downstream.
17. Is the flow indicator on the flow meter probe pointing in the direction of flow?

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