



## MODEL FT1 FLOW METER FEATURES

### 1. Direct Mass Measurement

The Fox Model FT1 measures the mass flow of gases directly in Standard Cubic Feet per Minute (SCFM), Normal Cubic Meters per Hour (NM3H), Kilograms per Hour (Kg/Hr), and other mass units without the need for pressure or temperature compensation. One isolated 4-20mA output programmable for flow or temperature is standard; HART communication optional. A second output is selectable for pulse or communication protocol options.

### 2. Process Temperature Measurement

The FT1 measures the process gas temperature. An isolated 4-20mA output programmable for flow or temperature is standard.

### 3. Outstanding Low Flow Capability, Wide Turn-Down Ratio

The Fox flow meter is capable of providing precise measurement of extremely low velocity gas flows. This results in a wide measurement range and a turn down ratio up to 1000:1; 100:1 typical.

### 4. Inline, Insertion, and Retractor Sizes

Inline type flow meters are available for ¾" to 6" pipes. Built-in flow conditioners reduce the requirement for long, straight pipe runs both upstream and down. The inline flow bodies are available in either 316 stainless or carbon steel. Insertion type flow meters are easy to install and can be installed in pipe diameters of 1 ½" and up. Retractor sizes are 15", 18", 24", 30", and 36".

### 5. Pressure Ratings

The FT1 insertion meter is rated to 740 psig (51.02 barg) and the FT1 with a retractor is rated to 150 psig (10.3 barg). A 316 SS inline meter with NPT ends is rated for 300 psig (20.1 barg), a 316 SS inline meter with 150 lb. flanges is rated for 230 psig (15.6 barg), a carbon steel inline meter with NPT ends is rated for 300 psig (20.1 barg), and a carbon steel inline meter with 150 lb. flanges is rated for 285 psig (19.7).

### 6. DDC-Sensor™

The DDC-Sensor™ is standard on all Model FT1 flow meters. Instead of using traditional analog circuitry, the DDC-Sensor™ is interfaced directly to the FT1 microprocessor for more speed and programmability.

### 7. In-the-Pipe Calibration Validation with CAL-V™

The FT1's CAL-V™ function allows operators to validate the meter's calibration accuracy by testing the functionality of the sensor and associated signal processing circuitry - all this with the simple push of a button. Fox's innovative approach lets users validate calibration in-the-pipe - under actual process conditions, including zero flow.

The FT1 View™ software automatically logs the date and results of each CAL-V™ test and can produce Calibration Validation Certificates to be saved or printed at the conclusion of the test.

### 8. Gas-SelectX®

The Model FT1 has many common gases pre-programmed into the meter so that the user can select a gas or create a custom gas mix from a list to fit the application. Current gas selections include: methane, carbon dioxide, nitrogen, air, natural gas, argon, propane, helium, oxygen, butane, hydrogen, ethane, and gas mixes (mix concentration of any 5 gases in this list is programmable by user).

### 9. Field-Programmable

The Display and Configuration Panel displays flow rate, flow total, elapsed time (hours since the totalizer was reset), process temperature and alarms. Field configurable variables include flow and temperature engineering units, 4-20mA scaling for flow and temperature, standard temperature and pressure (STP), pulse output scaling, zero flow cut off, alarm settings (high flow, low flow, high temp, and low temp), filter setting, and many others.

### 10. Digital Communications / FT1 View™

Bus options are Modbus RTU (RS485), BACnet MS/TP (RS485), and HART. The FT1 uses a standard USB port to connect to a PC. Fox's free FT1 View™ software provides complete configuration and remote process monitoring functions.

### 11. NIST Traceable Calibration

The Fox Calibration laboratory uses NIST traceable flow standards to ensure the highest level of accuracy. A calibration certificate is supplied with every meter.

*Some of the features listed are optional features*



## MODEL FT1 FLOW METER FEATURES (CONT'D)

### 12. Discrete Output

The discrete output can be set to provide a signal when alarms are generated.

### 13. Enclosure and Area Rating

NEMA 4X enclosure approved for FM and FMc Class I, Division 1; ATEX/IECEX Zone 1 approved. CE mark.

### 14. Input Power

Input Power: 12 to 28VDC, 20 watts max. Full Input Power Range: 10 to 30VDC, 20 watts max.

### 15. Approvals

#### CE: Approved

EMC Directive; 2014/30/EU

Emissions and Immunity Testing: EN61326-1:2013

Pressure Equipment Directive: 97/23/EC

Weld Testing: EN ISO 15614-1 and EN ISO 9606-1, ASME B31.3

#### FM and FMc: Approved

Class I, Div. 1, Gps B, C, D; Class II, Div. 1, Gps E, F, G; Class III, Div. 1; T4, Ta = -40°C to 70°C;

Class I, Zone 1, AEx/Ex d IIB + H2 T4; Gb Ta = -40°C to 70°C; Type 4X, IP66/67

#### ATEX (FM16ATEX0013X): Approved

II 2 G Ex db IIB + H2 T4; Gb Ta = -40°C to 70°C; IP66/67

II 2 D Ex tb IIIC T135°C; Db Ta = -40°C to 70°C; IP66/67

#### IECEX (IECEX FMG 16.0010X): Approved

Ex d IIB + H2 T4; Gb Ta = -40°C to 70°C; IP66/67

Ex tb IIIC T135°C; Db Ta = -40°C to 70°C; IP66/67

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