MTF-4400

Oxygen Thermal Gas Flow Meter

Overview:

Marmonix MTF-4400 Oxygen Thermal Gas Flow Meter is designed on the basis of thermal dispersion, and adopts method of constant differential temperature to measuring gas flow. It has advantages of small size, easy installation, high reliability and high accuracy, etc.

The meter contains two platinum resistance temperature sensors. The thermal principle operates by monitoring the cooling effect of a gas stream as it passes over a heated sensor. Gas flowing through the sensing section passes over two sensors one of which is used conventionally as a temperature sensor, whilst the other is used as a heater. The temperature sensor monitors the actual process values whilst the heater is maintained at a constant differential temperature above this by varying the power consumed by the sensor. The greater the gas velocity, the greater the cooling effect and power required to maintain the differential temperature. The measured heater power is therefore a measure of the gas mass flow rate.
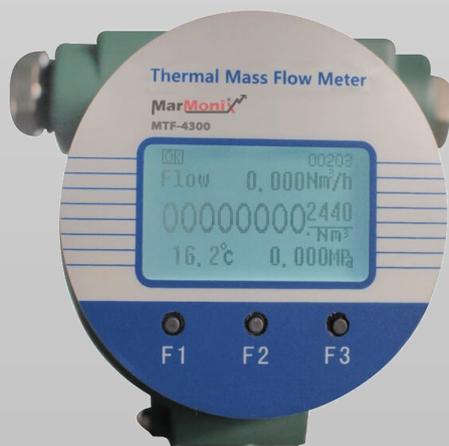
Features:

- Measuring the mass flow or volume flow of gas

- Do not need to do temperature and pressure compensation in principle with accurate measurement and easy operation.

- Wide range: 0.5Nm/s~100Nm/s for gas. The meter also can be used for gas leak detection

- Good vibration resistance and long service life. No moving parts and pressure sensor in transducer, no vibration influence on the measurement accuracy.

- Easy installation and maintenance. If the conditions on site are permissible, the meter can achieve a hot-tapped installation and maintenance. (Special order of custom-made)

- Digital design, high accuracy and stability

- Configuring with RS485 or HART interface to realize factory automation and integration

SPECIFICATION

Size	DN80-DN4000 (Insertion), DN10-DN2000 (Pipe)
Medium	Gas (except acetylene)
Velocity	0.5~100 Nm/s (20℃、101.33KPA)
Accuracy	±1% of read (Pipe), ±2.5% of read (Insertion)
Working Temperature	-40℃～+220℃ (Sensor), -20℃～+45℃ (Transmitter)
Working Pressure	Insertion ≤2.5 MPa, Pipe ≤4.0 MPa
Response	1s
Signal Output	Pulse,4-20mA (optoelectronic isolation, maximum load 500Ω)
Communication	RS485 (optoelectronic isolation), HART
Pipe Material	Carbon Steel, Stainless Steel
Sensor Housing Material	SS304 or SS316
Sensor Type	Standard Insertion, Hot-tapped Insertion , Flanged
Alarm Output	1-2 line Relay, Normally Open state, 10A/220V/AC or 5A/30V/DC
Protection Grade	IP65
Sensor Material	Stainless steel , Carbon Steel,
Power Supply	Compact type: 24VDC or 220VAC, Power consumption ≤18W Remote type: 220VAC, Power consumption ≤19W
Display	4 lines LCD , Mass flow, Volume flow in standard condition, Flow totalizer, Date and Time, Working time, and Velocity, etc

MODEL SELECTION

Model	X	X	X	X	X	X	X	X
Caliber	DN10-DN4000							
Structure	Compact	C						
	Remote	R						
Senor type	Insertion		I					
	Flange		F					
	Clamp		C					
	Screw/Thread		S					
Material	SS304			304				
	SS316			316				
Pressure	1.6Mpa				16			
	2.5Mpa				25			
	4.0Mpa				40			
Temperature	-40-200℃					T1		
	-40-450℃					T2		
Power Supply	AC85~250V						AC	
	DC20V~36V						DC	
Signal Output	4-20mA+Pulse+RS485							RS
	4-20mA+Pulse+HART							HT