Model: IN-TMFM (For Neutral Gases)

PTMF Series
Thermal Mass Flow Meter

Catalog

Model- INS-TMFM
(For Neutral Gases)

Features

- ♦ Measuring the mass flow or volume flow of gas;
  Do not need to do temperature and pressure compensation.
- ♦ Wide range: 0.5Nm/s～100Nm/s for gas.
- ♦ Good vibration resistance .
- ♦ Easy installation.Can realize hot-tap installation and maintenance.
- ♦ Dual power(12 V DC / 230 V DC) available.
- ♦ Inhouse Caliberation & Services.
- ♦ Insertion with anti flush-out design for high pressure,more safety;

Model:- IN-RD-TMFM (For Neutral Gases)

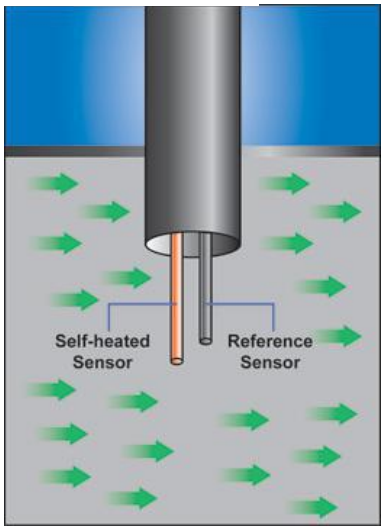
Introduction

What is a Thermal Mass Flow Meter?

A thermal mass flow meter is a precision instrument that measures gas mass flow and is used in various industries with a wide range of applications.

Working Principle

The thermal mass meter measures gas flow based upon the concept of convective heat transfer.



Either in-line flow bodies or insertion-style probes of the meter support two sensors that interface with the gas being measured. In the case of the Sage meter, the sensors are resistance temperature detectors (RTDs), consisting of extremely durable reference-grade platinum windings clad in a protective 316 SS or Hastelloy C sheath.

One of the sensors is heated by an integrated circuit and functions as the flow sensor, while a second detector acts as the reference sensor, and determines the gas temperature. The proprietary circuitry maintains a continuous overheat between the flow and reference sensor. As gas flows by the heated sensor, flowing gas molecules transport heat away from the sensor and as a result, the sensor cools and the energy is lost. The circuit balance is disrupted, and the temperature difference ΔT between the heated RTD and the reference sensor has been altered. Within a second, the circuit restores the lost energy by heating the flow sensor, to adjust the overheat temperature.

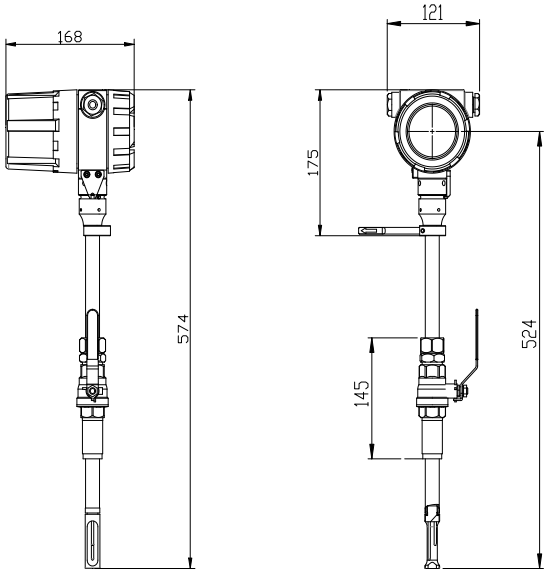
The electrical power required to sustain this overheat denotes the mass flow signal.

Technical Data

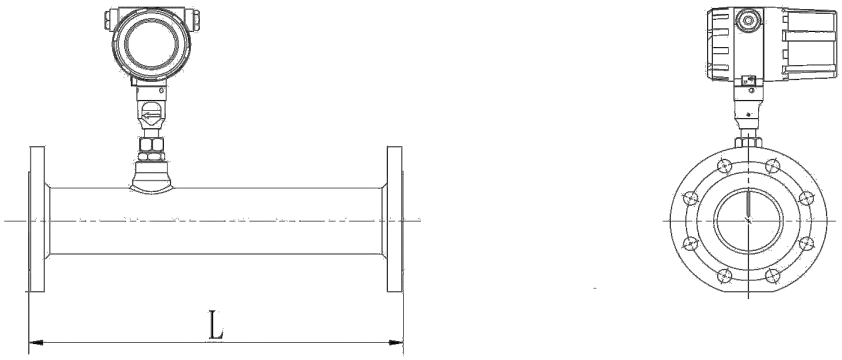
Description	Specifications
Measuring Medium	Various of Gas (Except acetylene)
Pipe Size	DN10-DN4000mm
Velocity	0.1-100Nm/s
Accuracy	+/-1~2.5%
Working Temperature	Sensor:- 0 t+ 60 degC Transmitter:-0 to+60 degC
Working Pressure	Insertion Sensor:medium pressure ≤1.0 Mpa Flanged Sensor:medium pressure ≤1 Mpa Special pressure please double check
Power Supply	Compact type: 12VDC or 220VAC, Power consumption Remote type:220VAC,Power consumption
Response Time	1s
Output	Optional:-4-20mA(optoelectronic isolation,maximum load 500Ω),Pulse RS485(optoelectronic isolation) and HART
Alarm Output	Optional:-1-2 line Relay, Normally Open state, 10A/220V/AC or 5A/30V/DC
Sensor Type	Standard Insertion, Hot-tapped Insertion and Flanged
Construction	Compact and Remote
Pipe Material	Carbon Steel, Stainless Steel,Plastic etc. For Chlorine & Corrosive Gases (SS316L)
Display	2 lines LCD Flow Rate : 4 Digits Totalizer: 8 Digits (Non Resettable)
Protection	IP65

Dimension

Insertion type



Flange type



Nominal Diameter	Pipeline Length
DN	L
15	280
20	280
25	280
32	350
40	350
50	350
65	400
80	400
100	500

Note: We Offer Customised Flow Solutions. So Mostly The Dimensions Can Be Changed As Required.