THERMAL MASS FLOWMETER

Features:

- Measuring the mass flow or volume flow of gas/air
- 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 (AC220V+DC24V) available.
- Modularization PCB, easily repairable
- Insertion with anti-flush-out design for high pressure, more safety

Working Principle of TMF Series Thermal Mass Flowmeter:

The thermal mass meter measures Gas/Air 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. The sensors are RTD's , consisting of extremely durable reference-grade platinum Windings clad in a protective 316 SS or Hastelloy C enclosure. One of the RTD is heated by an integrated circuit and functions as the flow sensor, while a Second RTD acts as the reference sensor, and determines the Gas/Air temp. As media 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 flow signal.

Technical Specification:

Description	Specification
Measuring Media	Various of Gases(except acetylene)/Air
Line Size	Insertion type : 50- 9000mm
Velocity	0.5 to 100Nm/s
Accuracy	±1.0%
Working Temperature	-10℃ to +200℃ / -10℃ to +350℃
Working Pressure	1.6Mpa
Power Supply	Compact type: 24VDC or 220VAC, Power consumption ≤18W
Response Time	1s(Max.)
Output	4-20mA / RS-485/ HART
Alarm Output	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
Display	Mass flow, Volume flow (normal condition), Integrated flow, Standard time/ Runtime
Protection	Integral type IP67; Split wall-mounted type IP65; Panel-mounted IP52

Shed No. 7, Nanekar Industries Building, Survey No. 79/2,
Dangat Industrial Estate, Shivane, Pune - 411 023, India
Contact No. : 8554982251
Email : jayceetech@gmail.com Website : www.jayceetech.com

THERMAL MASS FLOWMETER

Applications : Compressed Air Consumption, Control & Leakage Detection ,Combustion Air, Coal Gas, Exhaust Air monitoring in Power Plant ,Stack Flue Gas, Biogas, Landfill Gas, Flare Gas monitoring and flow metering for emission control ,Aeration Air monitoring in Wastewater Treatment Plants & many other applications.

Installation Conditions	
Inlet & Outlet Run	≥ 15DN & ≥ 2 DN respectively
Length of straight pipe(Insertion Type)	Upstream 20D,Downstream 5D
Maximum pipe diameter mismatch should not exceed:	-1 mm (0.04 inch) for diameters < DN 200 (8") -3 mm (0.12 inch) for diameters ≥ DN 200 (8")

Flow Range

Offered: Contact factory for additional details

Nominal Diameter	Air/ Nitrogen N2	Oxygen O2	Hydrogen H2
mm	Nm3/Hr	Nm3/Hr	Nm3/Hr
15	65	32	10
25	175	89	28
32	290	144	45
40	450	226	70
50	700	352	110
65	1200	600	185
80	1800	900	280
100	2800	1420	470
125	4400	2210	700
150	6300	3200	940
200	10000	5650	1880
250	17000	8830	2820
300	25000	12720	4060
400	45000	22608	7200
500	70000	35325	11280
600	100000	50638	16300
700	135000	69240	22100
800	180000	90432	29000
900	220000	114500	77807
1000	280000	141300	81120
1200	400000	203480	91972
1500	600000	318000	101520
2000	700000	565200	180480

Dimensions:

Shed No. 7, Nanekar Industries Building, Survey No. 79/2,
Dangat Industrial Estate, Shivane, Pune - 411 023, India
Contact No. : 8554982251
Email : jayceetech@gmail.com Website : www.jayceetech.com

THERMAL MASS FLOWMETER

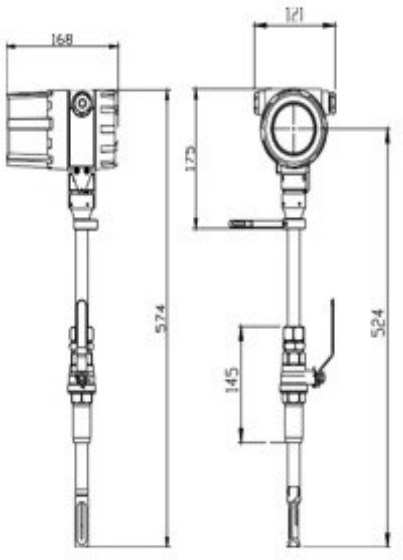

Fig 1.Standard Insertion

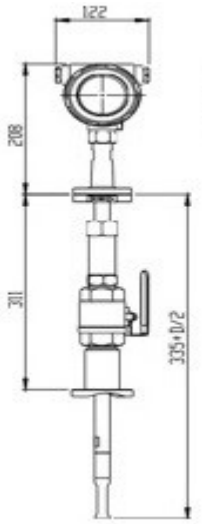

Fig 2. Hot-tapped Insertion

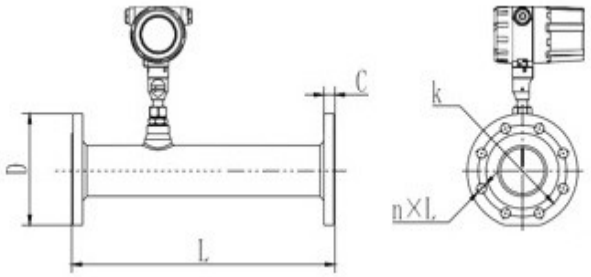

Fig 3. Flanged Sensor

Table . Plane and surface plate flat welding steel pipe flanges (Unit: mm)

Nominal Diameter	Flange Outer Diameter	Center Hole	Screw Hole	Screw Thread	Sealing Face		Flange Thickness	Pipeline Length
DN	D	k	n×L		d	f	C	L
15	95	65	4×14	M12	46	2	14	280
20	105	75	4×14	M12	56	2	16	280
25	115	85	4×14	M12	65	2	16	280
32	140	100	4×18	M16	76	2	18	350
40	150	110	4×18	M16	84	2	18	350
50	165	125	4×18	M16	99	2	20	350
65	185	145	4×18	M16	118	2	20	400
80	200	160	8×18	M16	132	2	20	400
100	220	180	8×18	M16	156	2	22	500

Model Selection:

A-TMF	Description

Shed No. 7, Nanekar Industries Building, Survey No. 79/2,
Dangat Industrial Estate, Shivane, Pune - 411 023, India
Contact No. : 8554982251
Email : jayceetech@gmail.com Website : www.jayceetech.com

THERMAL MASS FLOWMETER

Type	1	Insertion Thread
	2	Flange
	3	Thread
Nominal Diameter		
Temperature	1	-10℃ to +200℃
	2	-10℃ to +350℃
Power Supply	1	24VDC
	2	220VAC
Signal Output	1	4-20mA/Pulse/RS485
	2	4-20mA/Pulse/HART
Ex- Proof	1	Without
	2	Exd Ⅱ CT4

Selection example:

A-TMF	1	600	1	1	1	1

Shed No. 7, Nanekar Industries Building, Survey No. 79/2,
Dangat Industrial Estate, Shivane, Pune - 411 023, India
Contact No. : 8554982251
Email : jayceetech@gmail.com Website : www.jayceetech.com