



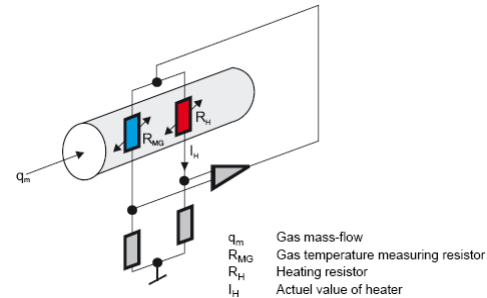
DATASHEET

THERMAL MASS FLOWMETER

Thermal Mass Flowmeter for compressed air & gases:

Introduction:

The thermal mass flowmeter is based on thermal dispersion and uses the constant differential temperature method to measure gas flow. It offers benefits such as compact size, easy installation, high reliability, and high accuracy.



Features :

- Measuring the mass flow or volume flow of gas.
- The design provides precise measurements and straightforward operation without the need for temperature and pressure compensation.
- Digital design, high accuracy and stability.
- No vibration influence on the measurement accuracy.
- Configuring with RS485 or HART interface to realize factory automation and integration.
- Simple installation and maintenance. Under suitable site conditions, the meter allows for hot-tapped installation and maintenance. (Custom-made special order required).
- Wide measurement range from 0.5 Nm/s to 100 Nm/s for gases. Suitable for gas leak detection with excellent vibration resistance and extended service life. The transducer features no moving parts or pressure sensors.
- Recording consumption data on a daily, monthly, or yearly basis.

Technical Specification:

Description	Specification
Measuring Medium	Air, LPG, O ₂ , N ₂ , Ar, CO ₂ , CH ₄ , H ₂ , and other gases (Customized)
Pipe Size	DN15~DN1600mm
Velocity	0.1~100Nm/s
Accuracy	±0.5~1.5%
Working Temperature	Sensor: -40°C~+220°C
Working Pressure	Insertion Sensor: medium pressure= 16 Bar Flanged Sensor: medium pressure= 16 Bar Special Pressure on request
Power Supply	Compact type: 24VDC or 220VAC, Power consumption = 18W Remote type: 220VAC, Power consumption = 19W
Response Time	1s
Output	4-20mA (optoelectronic isolation, maximum load 5000), Pulse, RS485 (optoelectronic isolation) and HART
Alarm Output	1-2 line Relay, Normally Open state, 10A/220V/AX 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.
Display	4 lines LCD Mass flow, Volume flow in standard, flow totalizer and Velocity etc.
Protection Class	IP65 & IP67
Sensor Housing Material	Stainless steel (316)

Appendix 3 Upper Range Value of Common Gas:

(Unit: Nm³ /h. The follow table can be extended)

Nominal Diameter (mm)	Air	Nitrogen (N ₂)	Oxygen (O ₂)	Methane (CH ₄)
15	65	65	32	46
25	175	175	89	125
32	290	290	144	207
40	450	450	226	322
50	700	700	352	500
65	1200	1200	600	858
80	1800	1800	900	1286
100	2800	2800	1420	2001
125	4400	4400	2210	3145
150	6300	6300	3200	4503
200	10000	10000	5650	7147
250	17000	17000	8830	12150
300	25000	25000	12720	17868
400	45000	45000	22608	32162
500	70000	70000	35325	50029
600	100000	100000	50638	71470
700	135000	135000	69240	96484
800	180000	180000	90432	128646
900	220000	220000	114500	157234
1000	280000	280000	141300	200116
1200	400000	600000	203480	285880
1500	600000	600000	318000	428820

Thermal Gas Mass Flowmeter Selection

Basic Model	VCTMF	S	T	S	1	N	O	S	C	7	1	
Series												
Thermal Mass Flow Meter (flow rate ranges 0.1~100Nm/s)												
Process Connection												
Flange in-line Diameter ≤ 300	F											
Insertion (G 3/4") 19mm dia (DN 65~ DN 400) Standard Configuration	S											
Insertion (G 1/2") 14mm dia (DN 50~ DN 300)	C											
Other (Customized details required *)	Q											
Transmitter												
Integral	T											
Remote	R											
Sensor Material												
SS 316	S											
Customized	C											
Pressure Rating												
16 bar				1								
25 bar				2								
40 Bar				3								
Flange Standard												
HG				A								
GB				B								
ANSI/ASME				C								
JIS				D								
Thread				E								
Not Applicable				N								
Medium												
Dry Air				A								
LPG				O								
Methane				C								
Oxygen				L								
Carbon dioxide				M								
Nitrogen				N								
Other gases (Customized details required *)				Q								
Medium Temperature												
Standard (T -40°C~220°C)				S								
Customized (T up to 350°C)				C								
Transmitter Enclosure												
Aluminum				A								
S.S Customized				C								
Output												
pulse/frequency + 4~20mA + RS485										7		
pulse/frequency + 4~20mA@HART										8		
Power Supply												
13.5~42VDC (24 V DC) or 85~265VAC 50/60Hz (220 V AC)											1	
Pipe Size												
Please use 4 digit pipe size, such as DN50=0050, DN300=0300											XXXX	

Remark:
Please specify the flow rate alongside the selected model number.
The model selected in 1st line is the standard with no accessories.
* Sign is for customized details
We reserve the right to modify specifications as necessary.