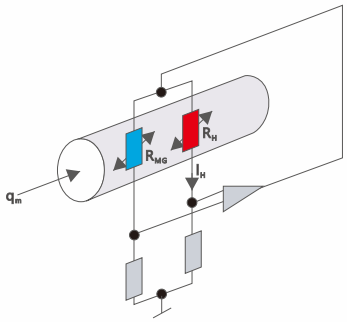
The selection is detailed on page 4

FTM30
Thermal Mass Flowmeter

Working principle

Thermal mass flowmeter is a flow meter based on the principle of thermal diffusion. That is, when a fluid flows through a hot object, the amount of heat lost by the hot object is proportional to the flow rate of the fluid. The sensor of this series of flowmeters has two standard RTDS, one is used as a heat source, one is used to measure the fluid temperature, when the fluid flows, the temperature difference between the two and the size of the flow into a linear relationship, and then through the micro-electronic control technology, the relationship is converted into a linear output of the measurement flow signal.



Product description

Thermal gas mass flowmeters are used for high precision measurement and automatic control of gas mass flow in systems. The standard I/O data signal can be used to complete the centralized control system of electronic computer. Compared with the traditional steam flowmeter, it does not need to be equipped with temperature and pressure transmitters, and can measure the mass flow immediately without compensation of temperature and working pressure. When the gas is used as a regulatory variable in the process (such as ignition, chemical change, natural ventilation exhaust pipe, commercial air drying, etc.), the quality flow controller is used to measure immediately and manipulate the total number of grams of the gas.

If you want to maintain the quantitative analysis of gas mixing as a wrong ingredient or seasoning, or to enhance the chemical process, there is no stronger technology than the application of quality flow controllers. The quality flow controller continuously adjusts the total flow rate, and the accumulated total flow rate can be obtained according to the display meter. The thermal gas mass flowmeter can convey leakage information in time, and is suitable for pipeline system software and gate valve sealing test. Easy to install, simple to operate, cost-effective, is the quality flow and quality flow controller of good choice.

Functional characteristics

Easy installation, simple maintenance two-way detection, anti-vibration
Up to 24 point flow measurement
Correction of output analog multipoint nonlinear curve correction
Wide range ratio 100:1
Flow and temperature are detected at the same time, switching display
Large diameter small flow measurement, leakage detection can be done
The sensor is packaged with a proprietary "double balance structure"
Proprietary high humidity, high temperature algorithm, medium temperature up to 300℃
Direct mass flow detection without temperature and pressure compensation

Product application

Monitoring of electricity, gas and water treatmentThe oil and gas industryElectric power industry, chemical industry, metallurgy industryPulp and paper industryFood and pharmaceutical industriesEnvironmental protection project

✆ 400-860-9760

For more product information, please visit www.ludwig-schneider.com.cn

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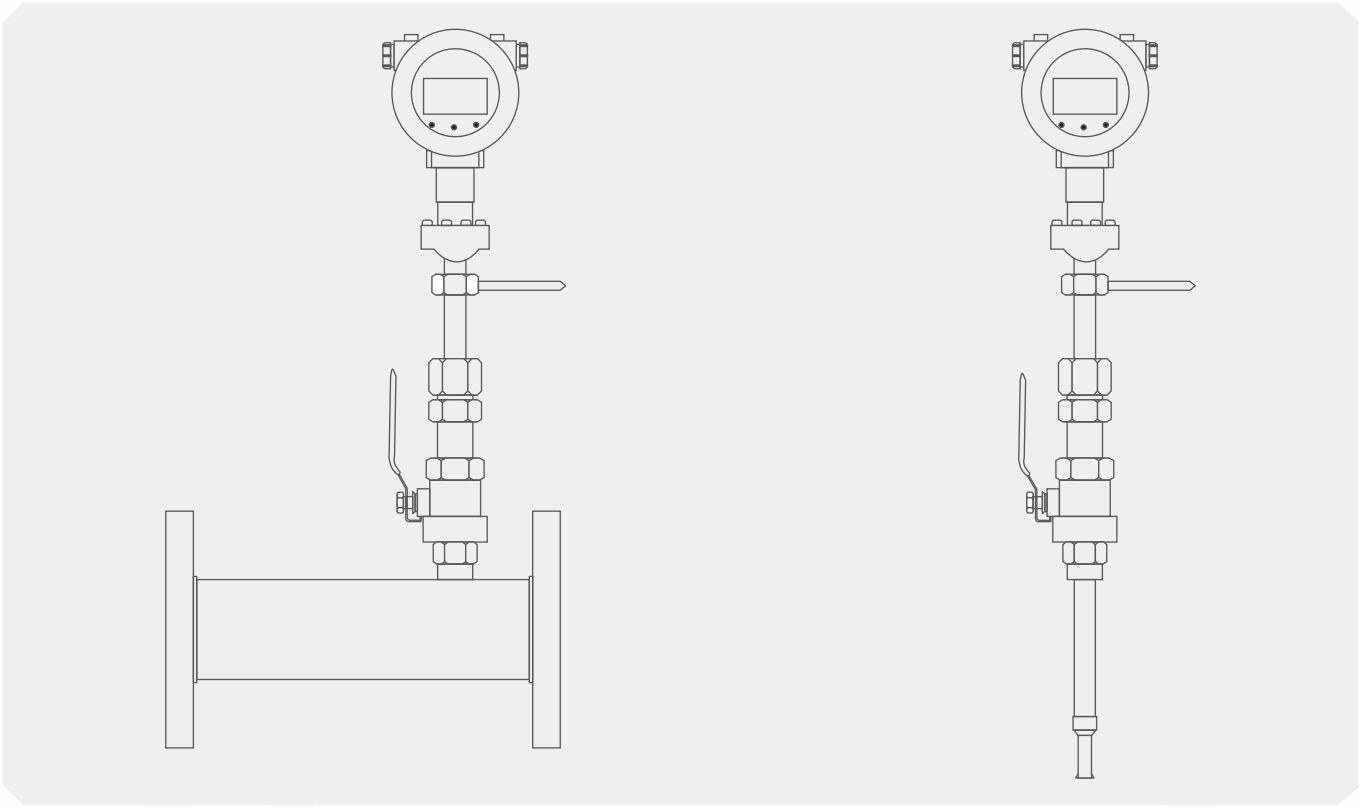
Technical parameter

Power source	
Operating voltage	DC20~30V; Standard: DC24V/1.5A;
	Allow residual ripple: When the value ranges from 0 to 100Hz, the Upp is 30Mv, and the Uss is less than 10mV
	Maximum noise: When 500Hz~ 10KHz, Ueff = 2.0mV
	AC85~265V
	Standard: AC110V or AC220V
Working current	<650mA DC
	<100mA AC
exportation	
Output current	4~20mA/ Fixed current (fixed output value optional)
RS485 output	Baud rate: 1200/2400/4800/9600/19200; Data bit: 8; Parity bits: None, Odd, or Even
	Stop bit: 1
RS232 output	Baud rate: 9600, data bit: 8, check bit: None,
	Stop bit: 1
Communication protocol	MODBUS RTU
property	
Ambient temperature	-20~150°C
Relative humidity	45% ~ 75%
Atmospheric pressure	86~ 106Kpa
Medium temperature	0 ~ 200 ℃; 0 to 300 ° C
Precision class	Plus or minus 1%; Plus or minus 1.5%
Preheating time	≤15s
Response time	< 100ms
Technical specification	
Range of measured flow velocity	0.5 ~ 120 nm/s
Applicable pipe diameter range	DN10-DN2000
Applicable flow range	0-770000Nm3/h (DN2000 air)
Applicable pressure range	<2MPa/< 10MPa
Applicable medium	Applicable to all gases except acetylene gas. Dust, sand, all kinds of corrosive gases.
Sensor diameter	Φ 18
Sensor material	1Cr18Ni9Ti, Hastelloy, titanium, 316L, aluminum, 304 stainless steel
Probe material	1Cr18Ni9Ti, 304 stainless steel, 316L
Transmitter housing material	Die-cast aluminum
Meter power supply	AC220V/AC110V/DC18-32V
exportation	Output four-wire system 4-20mA, RS232, RS485, HART
Field display	16 characters x 4 lines
Display type	Separate structure or integrated structure
Structural pattern	Insert type and tube type
Class of protection	IP65，IP66，IP67，IP68 Selectable

Size mm



Measuring caliber and flow range

Diameter(mm)	liquid	Normal temperature and pressure air
	Standard measuring range (m³/h)	Standard measuring range (m³/h)
15	0.8~6	6~40
20	1~8	8~50
25	1.5~12	10~80
32	1.6~16	15~150
40	2.5~30	25~200
50	3~50	30~300
65	5~80	50~500
80	8~120	80~800
100	12~200	120~1200
125	20~300	160~1600
150	30~400	250~2500
200	50~800	400~4000
250	80~1200	600~6000
300	100~1600	1000~10000
400	200~3000	1600~16000
500	300~5000	2500~25000
600	500~8000	4000~40000

FTM30-Selection composition

Selection example **FTM30**

A	G	N	S	Y	A	G	3.15	A	G	N	W	A
1	2	3	4	5	6	7	8	9	10	11	12	13

1.Process installation mode	A	Flange pipe type
	B	Insert type - threaded connection
	C	Insert type - flange connection
	T( )	Other installation methods
2.Display type	G	Integrated
	H	Split type
3.Signal output type	N	4~20mA
	O	4~20mA、HART Protocol signal
	P	4-20mA、Switching output
	Q	4~20mA+RS485
	R	4~20mA+FF bus
	S	4~20mA+PF bus
	U	4~20mA+MODBUS bus
	W	4~20mA+RS485+MODBUS bus
	V	4~20mA+ pulse output
	T( )	Other output signals can be combined for multiple selections
4.Temperature range	S	-40~200℃
	U	-40~300℃
5.Shell material	Y	Stainless steel
	Z	Aluminum
6.Sensor material	A	304
	B	316L
	C	Hastelloy HC
	T( )	Other materials
7.Medium name	G	liquid
	H	General gas
	I	Saturated steam
	J	Superheated steam
	K	gas
8.Dielectric density	D( )	(Note medium density)
9.Precision class	A	1.0level
	B	1.5level
10.Pressure rating	G	PN10
	H	PN16
	I	PN25
	J	PN40
	K	PN60
	L	PN100
	T( )	Other pressure levels
11.Flange connection specification (Do not select this option for plug-in.)	N	DN15
	O	DN20
	P	DN25
	Q	DN32
	R	DN40

FTM30-Selection composition

Selection example **FTM30**

A	G	N	S	Y	A	G	3.15	A	G	N	W	A
1	2	3	4	5	6	7	8	9	10	11	12	13

11.Flange connection specification(Do not select this option for plug-in.)	S	DN50	
	Z	DN65	
	U	DN80	
	V	DN100	
	W	DN125	
	X	DN150	
	Y	DN200	
	T( )	Other specifications	
11-1.Insert flange connection (Flange connection is not selected)	A	G1	
	B	G11/2	
	C	DN200	
	D	DN250	
	E	DN300	
	F	DN350	
	G	DN400	
	H	DN450	
	I	DN500	
	J	DN600	
	K	DN700	
	L	DN800	
	M	DN9000	
	N1	DN1000	
	O1	DN1400	
	P1	DN1600	
	T( )	Other specifications	
12.Class of protection	W	IP65	
	X	IP67	
13.Explosion-proof type	A	Intrinsically safe explosion protection	
	B	flameproof	
	N	Non-explosion proof	

Instructions:

The FTM30 thermal gas mass flow meter is a flange pipeline type, with an integrated display type, a signal output of 4-20mA, a temperature range of -40 to 200 ℃, a stainless steel body material, 304 stainless steel liquid connection material, measuring medium liquid, density of 3.15, accuracy of 1.0, pressure resistance level of PN10, flange specification of DN15, protection level of IP65, and no explosion-proof.

Product Certification

Compliance and approval; Ludwig flow meters meet key standards and certifications for process measurement technology; To ensure the highest reliability in such settings;

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