DATASHEET | Flow

Thermal Gas Mass Flow Meter
Model PWF-TGMF



Description

PWF-TGMF Thermal gas mass flow meter is designed on the basis of thermal dispersion. Adopts method of constant differential temperature to measuring gas flow. It has advantages of small size, easy installation, high reliability and high accuracy.

Thermal gas mass flow sensor is a new type of gas mass flow sensor that can conveniently and accurately detect the mass flow of air, nitrogen, hydrogen, oxygen, chlorine, natural gas, flue gas, biogas and other gases flowing in pipelines without temperature or pressure compensation.

It can be widely used in process control and gas flow measurement of gas production and consumption in petroleum, chemical industry, metallurgy, electric power, water treatment, papermaking, food, medicine, cement, textile and various production and scientific research units.

Features

- Measuring the mass flow or volume flow of gas
- Wide range: 0.5Nm/s ~ 100Nm/s for gas. The meter also can be used for gas leak detection
- No need temperature and pressure compensation in principle with accurate measurement and easy operation
- 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 site conditions permit, installation and maintenance can be achieved without stopping production. (Need special customization)
- Digital design, internal digital circuit measurement, high accuracy and stability
- Support RS485 or HART communication, can realize factory automation and integration

Specifications

Parameters	Specification
Measuring Medium	Various gases (Except acetylene gas)
Pipe Size	DN10～DN4000mm
Velocity	0. 1～100 Nm/s
Accuracy	±1～2.5%
Working Temperature	Sensor: -40℃~+220℃ Transmitter: -20℃~+45℃
Working Pressure	Insertion Sensor: medium pressure ≤ 1.6MPa Flanged Sensor: medium pressure ≤ 1.6MPa Special pressure please contact us
Power Supply	Compact type: 24VDC or 220VAC, Power consumption ≤18W Remote type: 220VAC, Power consumption ≤19W
Response Time	1s
Signal Output	4-20mA (optoelectronic isolation, maximum load 500Ω), Pulse, RS485 (optoelectronic isolation) and HART
Alarm Output	1-2 relay normally open contacts, 10A/220V/AC or 5A/30V/DC
Sensor Type	Insertion, Hot-tapped(online installation) Insertion and Flanged
Construction	Compact(Integrated) and Remote
Pipe Material	Carbon steel, stainless steel, plastic
Display	4 lines LCD: Mass flow, standard volume flow, cumulative flow, standard time, cumulative running time, velocity, etc.
Protection Class	IP65
Sensor Housing Material	SUS304, 316L stainless steel, carbon steel

Appearance

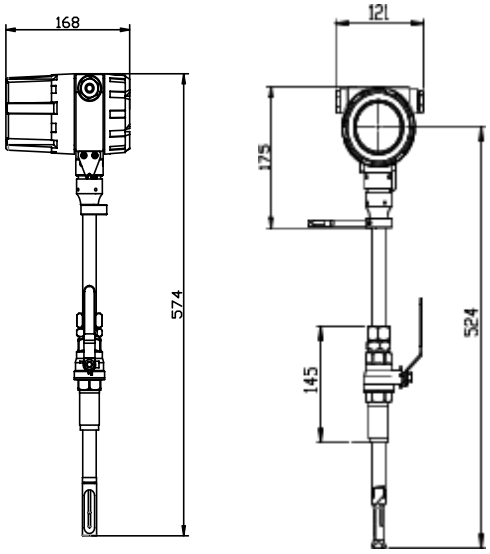
Compact Insertion Flow Meter
Pipe size DN100-DN500

Flanged Flow Meter
Pipe size DN10-DN80

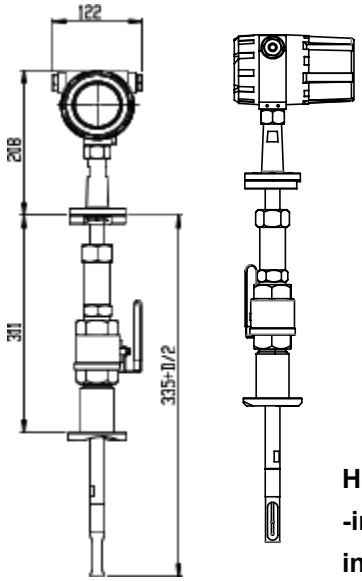
Online Installation Insertion Flow Meter
Pipe size DN100-DN4000

The insertion type flow meter should be inserted to axis of pipe, and the length of the insertion sensor is decided by pipe size, please confirm the pipe size when ordering. If the insertion sensor can't be inserted to axis of pipe, POKCENSER will provide a calibration factor to achieve an accurate measurement.

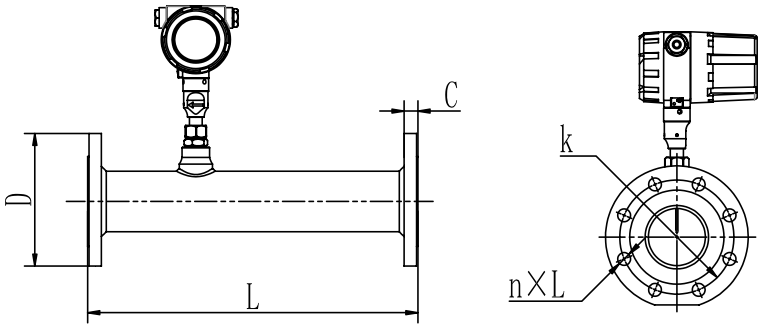
Dimensions (mm)



Compact insertion sensor



Hot-tapped(online -installation) insertion sensor



Flanged sensor

Electrical Connection

Sensor Wiring

1	2	3	4	5	6
RT1	RT2	RT2	RH1	RH2	RH2
PT1000A	PT1000B	PT1000B	PT20A	PT20B	PT20B

Temperature sensor (Pt1000)　　Heater (Pt20)

Transmitter Wiring