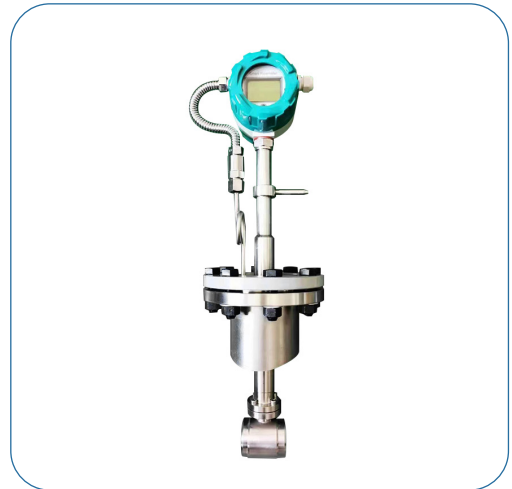


FMV200 SERIES INSERTION VORTEX FLOW METER

FEATURES

- ◎ Allows installation under pressure without system shutdown, minimizing operational disruption.
- ◎ Designed for large-diameter pipes (DN200mm and above), offering easy and cost-effective installation.
- ◎ Insertion depth determines flow detection, enabling one model to suit various pipe sizes with strong adaptability.
- ◎ Suitable for measuring saturated and superheated Steam, gases, liquids.



INTRODUCTION

The FMV200 series is a highly efficient and cost-effective flow measurement solution designed for large-diameter pipelines. Leveraging advanced under-pressure technology for installation and flow detection, it offers a range of benefits for industries requiring precise fluid measurement in diverse conditions.

SPECIFICATIONS

Nominal diameter(mm)	DN150~DN1600
Nominal pressure (MPa)	DN15-DN200 4.0(>4.0 supply agreement), DN250-DN300 1.6(>1.6 supply agreement)
Medium temperature (°C)	Piezoelectric type:-40~150,-40~250,-40~350, Capacitive type:-40~400(supply agreement)
Body material	1Cr18Ni9Ti (Other materials on request)
Allowable vibration acceleration	Piezoelectric type: 0.2g Capacitive type:1.0~2.0g
Accuracy	±2.5%R,±2.5%FS
Ratio range	1:8~1:30
Power supply	Sensor:+12VDC,+24VDC ,Transmitter:+12VDC,+24VDC Battery-powered:3.6V battery
Output signal	Square wave pulse (excluding battery-powered) ,high level ≥ 5V, low level ≤ 1V, Current: 4 ~ 20mA
Pressure loss coefficient	Comply with JB/T9249 standard Cd ≤ 2.4
Explosion-proof	Intrinsically safe type:Exd II ia CT2-T6, Flameproof type: Exd II CT2-T6
Protection	Standard type: IP65 , Diving type: IP68
Environmental conditions	Temperature:-20 °C ~55 °C , Relative humidity: 5%~90%, Atmospheric pressure: 86~106kPa

Medium	Gas, liquid, steam
Transmission distance	Three-wire pulse output type: $\leq 300\text{m}$ Two-wire current output type (4~20mA) $\leq 1500\text{m}$, Load resistance $\leq 750\Omega$, RS485/HART $\leq 1200\text{m}$

WORKING FLOW RANGE OF VORTEX FLOW SENSOR UNDER STANDARD CONDITIONS

Insertion type	150	35~350	350~3500
	200	60~600	600~6000
	250	10~1000	800~8000
	300	100~1800	1200~12000
	400	200~2500	2000~20000
	500	300~4000	3500~40000
	600	500~5000	4500~55000
	800	750~9000	9000~100000
	1000	1200~17000	12000~150000
	>(1000)	negotiation	negotiation

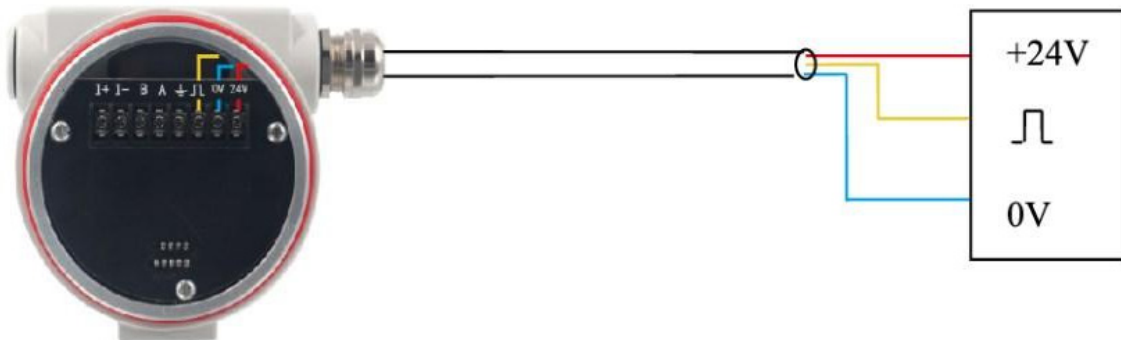
STANDARD STATE DENSITIES OF COMMONLY USED GASEOUS MEDIA (0° C, P = 0.1 MPA)

Gas name	Density (kg/m ³)	Gas name	Density (kg/m ³)
Air (dry)	1.2928	Acetylene	1.1717
Nitrogen	1.2506	Ethylene	1.2604
Oxygen	1.4289	Propylene	1.9140
Argon	1.7840	Methane	0.7167
Neon	0.9000	Ethane	1.3567
Ammonia	0.7710	Propane	2.0050
Hydrogen	0.08988	Butane	2.7030
Carbon monoxide	1.97704	Natural gas	0.8280
Carbon dioxide	1.3401	Coal to gas	0.8020

WIRING

FREQUENCY OUTPUT(THREE-WIRE)

The sensor uses a DC24V or DC12V power supply and connects via a three-core shielded cable (RWP3x0.5mm) to a display or computer. Ensure the cable's shielding is grounded to the amplifier housing. Keep shielded cables away from high-power lines and avoid parallel routing. Terminal wiring is shown below.

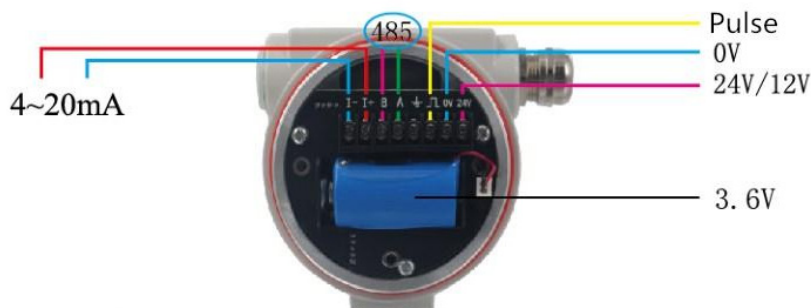


4~20MA OUTPUT(TWO-WIRE)

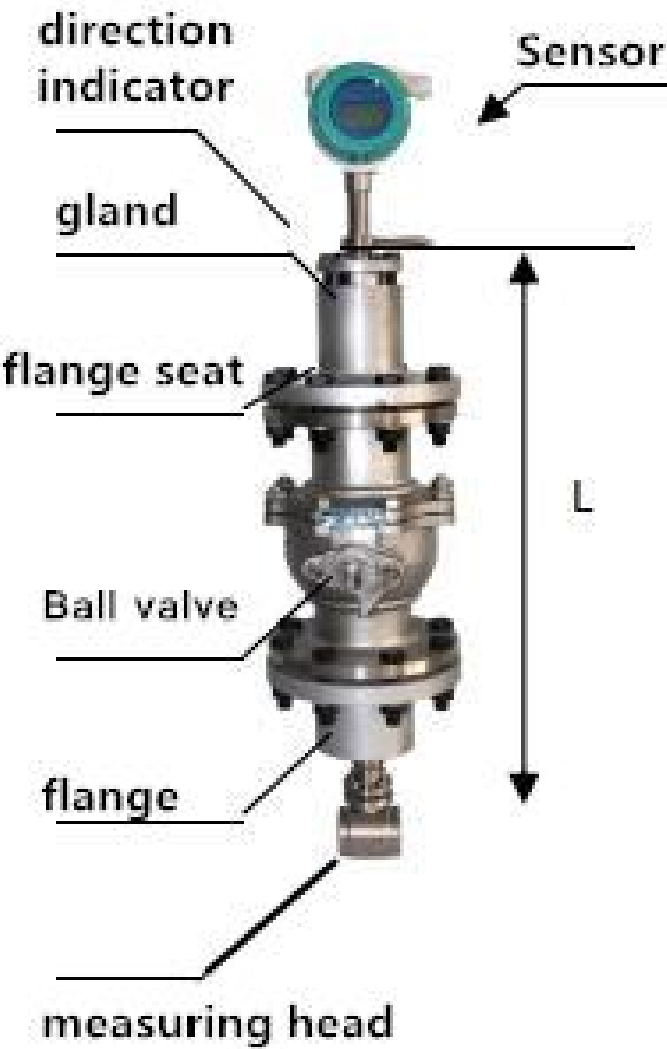
Powered by DC24V, the two-wire transmitter connects via a two-core shielded cable (RWP2x0.5mm) to the display or controller. The shield must be grounded to the amplifier housing, and cables should be kept away from high-power lines and not routed in parallel. Terminal wiring is shown below.



RS485/4-20MA/PULSE/12-24VDC/3.6V BATTERY



DIMENSION



Diameter (mm)	DN150	DN200	DN250	DN300	DN400	DN500	DN600	DN800- -2000
L	850	850	900	925	975	1075	1125	1175-1775

ORDER FORMAT

FMV200 - 200SP16BCDEX

Nominal diameter	Code
DN150mm	150
...	...
DN1600mm	600

Medium	Code
Liquid	L
Gas	G
Steam	S

Nominal pressure	Code
4.0MPa	P40
2.5MPa	P25
1.6MPa	P16

Code	Special requirement
Null	Non Explosion-proof
EX	Explosion-proof

Code	Power supply
D	24VDC/12VDC
B	3.6V Lithium battery

Code	Output signal
C	4~20mA
P	Pulse
H	HART
R	RS485

Code	Compensation
0	No compensation
T	Temperature compensation
P	Pressure compensation
B	Pressure+Temperature

Example:

FMV200-F50SP16BCDEX, FMV200 series insertion vortex flow meter, DN200mm, measuring medium steam, pressure 1.6MPa, pressure and temperature compensation, 4~20mA output, power supply 12/24VDC, explosion proof type.