

## Sense WFD Series electromagnetic flowmeter



### Outlined

Electromagnetic flowmeter is an application of Faraday's law of electromagnetic induction flowmeters by lining its main sensor measurement of the insulation material, through the wall of the installation of a working electrode, and to produce a magnetic field coil and the core components. When the conductivity of the fluid flow sensor, the sensor electrode and will produce an average fluid velocity is proportional to the voltage signal. The signal amplification by converters, directly reflect the cumulative flow and transient flow and can output analog and digital signals. Electromagnetic flowmeter can be used to measure conductivity of liquid pipeline closed and the volume of slurry flow, applied to the chemical industry, electric power, metallurgy, mining, water supply and drainage, paper, pharmaceuticals, food and other industries.

### The main technical parameters and function

#### Instrument main function

- A; Flow measurement function; The instantaneous flow measurement, cumulative flow, velocity and at the same time .
- B; tracking; In fluid flow zero, tracking, automatic zero adjustment
- C; Cut off the flow of small function; Before moving flows can be set value, or resection of the small flow mutation interference suppression
- D; Pros flow indicator; Forward flow, the flow of instructions for the "+" reverse flow, the instructions "-."
- E; Damping function; 0-99 seconds of the time set damping, the average of the instantaneous flow measurement.
- F; ATC alarm function; When the ATC pipeline, the police are given instructions, the cumulative stop.
- G; Upper and Lower alarm function; The instantaneous flow can be set upper and lower limits, when flow overruns, the police are given instructions and alarm signal output.
- H; Signal output function; 4-20mA output, output value and should be relatively instantaneous flow, the corresponding range adjustable.
- I; Calibration function; Instrument calibration sub can further enhance the linear meters, expanding the scope of measurement, the measurement accuracy.

J;Set password function; Passwords can be set to prevent arbitrary operation.

K;Environmental conditions; Temperature: -10 ° C -60 ° C relative humidity of 5% -90%

L;Working conditions;

Somatotype: 70 ° C

Separated :Poly PTFE lining --- 120 ° C, poly chloroprene rubber lining ---80 °C,  
polyurethane lining --80 °C, polypropylene liner --- 120 °C.

Fluid conductivity: not less than 5us/cm

M;frame; Flange type: 4.0Mpa (DN10 - DN150) 1.6Mpa (DN10-converter )

Facing folder: 4.0Mpa (DN10 - DN150) 1.6Mpa (DN10-converter)

N;Power; Single-phase AC 85V - 265V, 45Hz - 450Hz ,18V - 36V DC

### Technical parameters

The implementation of standards; JB/T9248-1999 electromagnetic flowmeter

#### Basic parameters and performance indicators

- Nominal diameter: 10,15,20,25,32,40,50,65,80,100,125,150,200,250,300,350,400,450,  
500,600,700,800 , 900,1000
- Corresponding velocity of the flow range: 0-1.5 m / s to 0-12 m / s
- Accuracy:  $\pm 0.5\%$  (indication)
- Measurement of materials: stainless steel 1Cr18Ni9Ti
- Lining materials: Teflon, polyethylene chloroprene rubber, polyurethane, polypropylene
- Electrode materials: stainless steel 0Cr18Ni12Mo2Ti, Harrington alloy B, C Harrington alloys,  
titanium, platinum according alloy, stainless steel coated tungsten carbide.
- Flange materials: carbon steel, stainless steel.
- Protective shell: IP65/68
- Explosion levels: Exia II Skilling
- SPLIT Sensor and converter spacing  $\leq 100M$
- Power loss: <20W
- Time constant-99 seconds:
- Resection of the small signal:-49%
- Input impedance: 1015 Ohm, a simulation system than 110db, the school  
system can automatically spot "0"
- Luxury-20mA current output  $\pm 0.01mA$
- Load-750 ohm resistor:
- Frequency output: maximum output frequency or optional 1KHz kHz,  
with the photoelectric isolation transistor collector on the next 20K ohm resistor  
output, high-output voltage: nationally  $RL = 24V \times / (RL +20 K \text{ ohms})$ ,  $VL = 0V$ ,  
error <1Hz , the external power supply is not greater than 35V, or internal  
segregation +24 V power supply.
- Pulse output: the accumulated output of pulses, with photoelectric isolation  
transistors open collector output, an external power supply is not greater than 35V,  
or internal segregation +24 V power supply, high-voltage output ibid., nationally VL ibid.
- Threshold of total output: 0.001 million cubic meters -1000 cubic meters can be located.
- Output level: nationally  $VL = +5 V = 0V$
- Serial output: standard RS485 serial interface
- Anti-jamming: electromagnetic compatibility and anti-jamming performance is

better than the international standard 3

--- Electrical isolation: analog input and analog output voltage Insulation > 500V, analog input and AC power Insulation > 1500V, and the analog output voltage insulation between the earth > 500V, and the analog output AC power Insulation > 1500V, pulse output voltage and earth Insulation > 500V, pulse output and AC power Insulation > 1500V.

### Appearance size

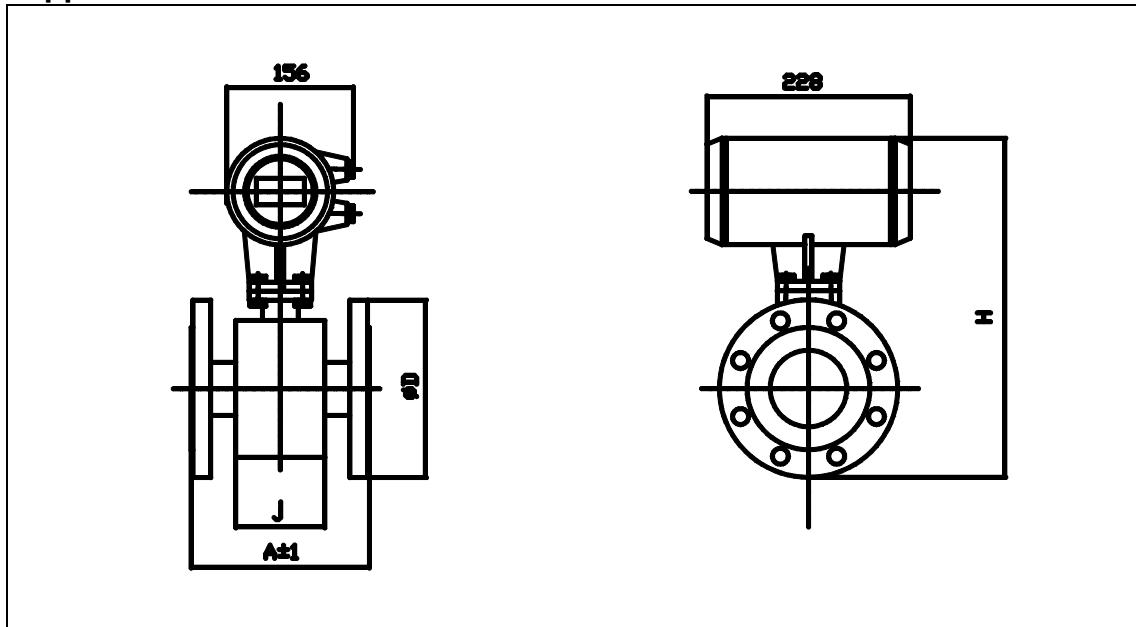


Table 1

Nominal diameter	A	B	C	Reference weight
10	200	60	284	10
15	200	60	294	12
20	200	60	307	14
25	200	60	312	16
32	200	75	334	17
40	200	75	352	19
50	200	100	368	22
65	200	100	382	25
80	200	100	400	29
100	250	135	430	31
125	250	135	460	37
150	300	150	483	41
200	350	180	545	45
250	450	210	603	50
300	500	240	653	60
350	550	310	713	145
400	600	390	773	180
450	600	390	823	215
500	600	390	875	245

600	600	390	985	335
700	700	470	1098	435
800	800	550	1217	545
900	900	640	1317	655
1000	1000	710	1425	810

### Parametric Selection

Sense-WFD—□□-□-□-□-□-□-□-□-□-□-□

A B C D E F G H I J

A----Nominal Diameter DN ( mm )

code	DN	code	DN	code	DN
11	10	27	80	43	400
13	15	29	100	45	450
15	20	31	125	47	500
17	25	33	150	49	600
19	32	35	200	51	700
21	40	37	250	53	800
23	50	39	300	55	900
25	65	41	350	57	1000

B----pressure ( Mpa )

06—0.6 ( DN10 - DN1000 )

10—1.0 ( DN10 - DN1000 )

16—1.6 ( DN10 - DN600 )

40—4.0 ( DN10 - DN150 )

C----Lining Materials

1-Polytetrafluoroethylene (F4) (DN10-DN1000)

2-Poly chloroprene rubber (DN10-DN1000)

3-Polyurethane (DN15-DN1000)

4-Polypropylene (DN10-DN1000)

D----Electrode Material

1 stainless steel 0Cr18Ni12MoTi

2 Harrington alloy B

3 Harrington alloy C

4 Titanium

5 Pt / Ir alloys

6 tantalum alloy

7 stainless steel tungsten carbide coating

E----Sensor protection rating

- 1 IP65
- 2 IP68

F----Explosion levels

0 no

1 md II BT4 ( somatotype IP65, DN10 - DN600 )

2 md II BT4 ( Separated IP65, DN10 - DN1000 )

3 md II BT4 ( Separated IP65, Converters in the security zone DN10 - DN600 )

G -- Annex

0 No

1 flange Grounding

H - Structure

1 Separated

2 somatotype

I - Power

1 85--265VAC 45--50Hz

2 18-36VDC

J ---- converter form

1 the keys

2 infrared remote -