

SELECTION CATALOG

Electromagnetic Flowmeter



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About us.

Founded in 1985 and headquartered in Hangzhou China, Zhenhua is an international company dedicated to the research and production of electromagnetic flowmeters and other industrial measuring instruments. As an industry expert in China, Zhenhua has 39 years of rich application experience in the field of industrial measurement through providing end users with one-stop measurement solutions; Meanwhile, we also would provide customizable measurement solutions for complex production environment.

We focus on kinds of industries: chemical, water treatment, pharmaceutical, paper, food and beverage, power and energy, etc. To meet different working conditions, there are various connection methods to be selected by our customers.

We always insist to provide best product for customers and contribute our partner to make better.



WHAT WE DO

Our business is established on the basis of high quality, good price and honesty.

All of customers will have our best service and share the most reasonable price.

We have very good cooperation with many enterprises in domestic and abroad.

Now our products not only sale on the market of China, but also export to USA, Europe and other Asian countries, etc.

Company Milestones

1985

Established and launched the first electromagnetic flowmeter in China

1997

The first to launch the LDQ general flow calculator

2004

The product was selected as the standard table of inspection device by China National Metrology Institute

2002

The first intelligent electromagnetic flowmeter was launched

2006

The sanitary electromagnetic flowmeter was launched and entered the food industry

2007

Participated in the drafting of the China National Electromagnetic Flowmeter Establishment Verification Regulations (JJG1033-2007)

2016

The low-conductivity electromagnetic flowmeter was successfully launched, and the conductivity was stably measured as low as $1\mu\text{s/cm}$

2008

The first electromagnetic flowmeter with energy metering function was launched

2017

The low-conductivity electromagnetic flowmeter was successfully launched, and the conductivity was stably measured as low as $1\mu\text{s/cm}$

2022

Two facilities was built with capacity of 30,000 units per year

2020

The right-angle electromagnetic flowmeter was successfully developed

CONTENTS

Products Overview	2
General Type EMF89/EMF86	
Low Conductivity Type EMF8D	
Microflow Type EMF8W	
Slurry Type EMF8J	
Energy Metering Type EMF8E	
Technical Parameter	11
Sensor Parameter	
Electrode Parameter	
Lining Parameter	
Measuring Range parameter	
Model Selection	18
Code Selection	
Additional Options	
Reference List	21
Liquid Conductivity	
Assessment Sheet	22

Introduction

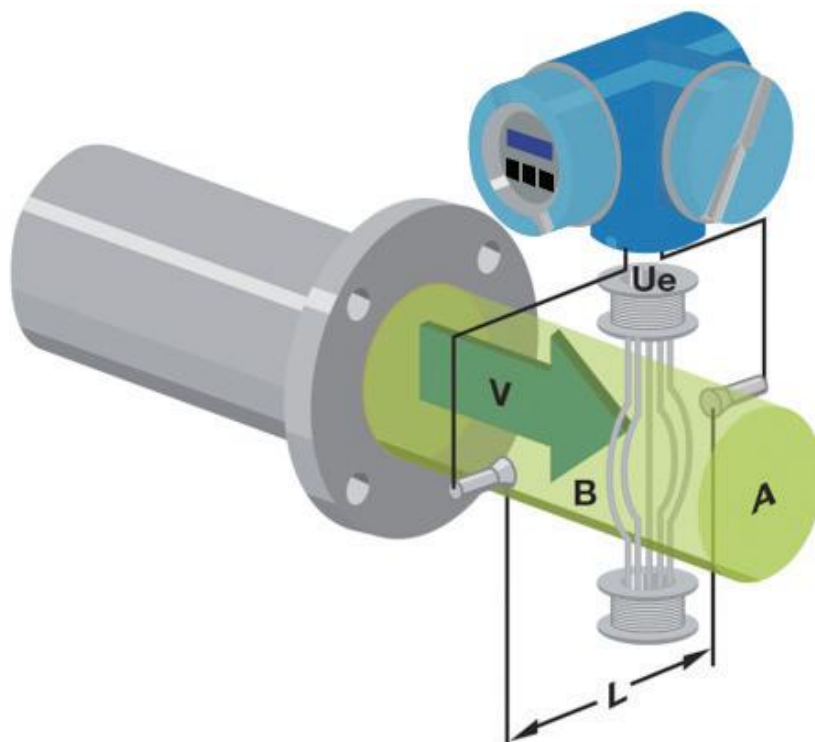
Electromagnetic Flowmeter

Working Principle

When the conductive liquid is cutting the magnetic lines in the magnetic field, the ends of conductor will induce electromotive force(E), which is vertical to direction of movement and magnetic field. The electromotive force and the velocity of conductive liquid(V) are in a direct ratio, that is $E=BLV$ (B: magnetic induction strength of the magnetic field; L: conductor length; V: velocity of cutting the magnetic lines)

After the converter has the power, the excitation current drive coils form the magnetic field in the measuring tube, and when the media flows along the measuring tube and cutting the magnetic lines, the induced electromotive force transmitted to the converter through the two electrodes on the pipe wall, signal processing and computing by the converter, and then convert the measured flow value.

The display shows the measured flow data, and output the data by the way of 4-20mA, pulse or RS485.



Description

The electromagnetic flowmeter mainly measure the flow of various conductive liquid or solid-liquid two-phase fluid, such as water, sewage, mud, paper pulp, beverage, chemical, viscous liquid and suspension. Our electromagnetic flowmeter consists of converter and sensor.

The converter and the sensor can be directly assembled into an integrated electromagnetic flowmeter, or be connected by external signal cable to form a split electromagnetic flowmeter.

Technical Competitiveness

- Unmatched stability, repeatability, accuracy (up to 0.2%)
- Available measurable conductivity as low as 1 $\mu\text{s}/\text{cm}$
- Excellent measurable flow rate down to 1L/h
- With lining mesh technology, it can be used under negative pressure or vacuum
- Various international standard flange connections are available
- Optional AC, DC, battery and other power supply methods
- Optional MODBUS, HART and other communication methods
- With instrument coefficient nonlinear correction function
- Possible operating without opening the cover through bluetooth and magnetic button
- Optional gas, dust explosion-proof function

Advantage Bring You Benefits

- Super cost-effective, high-class quality
- Short delivery time (available 3-4 week)
- Warranty long up to 3 years
- Lifetime up to 10 years
- Modular design for easy repairs and maintenance

EMF89 General Series

EMF89 electromagnetic flowmeter adopts international advanced design concept and R&D technology to ensure that the product achieves high precision, high performance and wide measuring range. Products are widely used in various industries and suitable for various process applications. EMF89 series electromagnetic flowmeter consists of E89 converter and flange-type, holder type, thread-type and clamped-type sensor. EMF89 series electromagnetic flowmeter has the structure of integrated type and split type.

Technical Advantage

- Wide range of applications: various lining and electrode materials
- Lower installation requirements: front 5D and rear 2D straight pipe section
- Electromagnetic compatibility: comply with GB/T 17626 and IEC 61000 technical specifications
- Energy-saving measurement: no flow obstructions, almost no pressure loss
- Minimalist repair: modular design converter, uninterrupted power-supply repair
- Maintenance-free: no moving parts
- Wide range ratio: 1000:1

Application Areas

Various conductive liquid or solid-liquid two-phase fluid, such as water, sewage, mud, paper pulp, beverage, chemical, viscous liquid and suspension.

Technical Data

Display	4-line English LCD display, display the data of forward and reverse flow, percentage of flow and flow velocity.
Parameter Setting	Setting the parameters with the button, ultrared remote control and bluetooth (smart phone).
Language	Chinese, English. Can customize traditional Chinese, Spanish, Korean
Current Output	4-20mA, load Resistance $\geq 500\Omega$ (include cable resistance), HART
PIO	Can choose passive pulse output, active pulse output, state output/alarm output and contact signal input.
	Passive pulse output 30VDC (Off), 200mA(On); 0.0001-5000Hz; Pulse width: 50% duty cycle of the fixed value (≤ 100 ms)
	Active pulse output: 0.0001-2000Hz, ≈ 150 mA, 15 VDC $\pm 20\%$; Pulse width: ≈ 100 ms (The default value: 20ms)
	State/Alarm output: contact capacity: 30VDC (Off), 200mA(On) Contact input: passive contact, load resistance: closed $\leq 200\Omega$, disconnected $\geq 100k\Omega$
Communication	RS 485(MODBUS-RTU), BACNET, HART
Power Supply	220VAC 50Hz/60Hz, 24VDC, (100-240)VAC
Alarm	Empty pipe alarm, reverse alarm, upper limit and lower limit alarm.
Protection Level	IP65, IP67
Accuracy	0.2%, 0.3%, 0.5%
Explosion-proof Class	Exia/db eb II CT3 ~ T6 Ga/Gb Ex tb III C T200°C Db
Structure	Integrated Type, Split Type

P

Product Overview

Flange Type



Integrated Type



Clamped Type



Holder Type

Thread Type



Flange Sensor



Split Type



Clamped Sensor



Holder Sensor



Thread Sensor



Note: The shape of the selected converter for EMF 89 series is the round.

P Product Overview

EMF86 Series

EMF86 electromagnetic flowmeter is a wall-mounted flowmeter that provides the possibility of remote flow display on site. EMF86 converter uses specialized high-speed CPU and advanced signal processing technology, this technology can ensure the accurate measurement of flowmeter in the range of 0.1-12m/s, and can be specially used in the case of lowest flow rate of 3mm/s and larger flow fluctuation. It is very popular to the user due to the large-screen LCD display, unique toolbar design, simple outline and unique button design .

Technical Advantage

- Wide range of applications: various lining and electrode material
- Lower installation requirements: front 5D and rear 2D straight pipe section
- Electromagnetic compatibility: comply with GB/T 17626 and IEC 61000 technical specifications
- Energy-saving measurement: no flow obstructions, almost no pressure loss
- Minimalist repair: modular design converter, uninterrupted power-supply repair
- Maintenance-free: no moving parts
- Wide range ratio: 1000:1

Application Areas

Various conductive liquid or solid-liquid two-phase fluid, such as water, sewage, mud, paperpulp, beverage, chemical, viscous liquid and suspension.

Technical Data

Display	4-line English LCD display. Display the data of forward and reverse flow, instantaneous flow, percentage of flow and flow velocity.
Parameter Setting	Setting the parameters with the button and bluetooth.
Language	Chinese, English. Can customize traditional Chinese, Spanish, Korean
Current Output	4mA-20mA, Load Resistance \leq 500 Ω (include cable resistance)
Pulse Output	Can choose full frequency or pulse equivalent output, the maximum frequency value of output is 5kHz. (Passive Pulse: Pressure \leq 30V, Load Currents \leq 200 mA)
Alarm Output	Shared with the pulse output contact, can choose upper or lower alarm.
Protection Level	IP65
Communication	RS 485(MODBUS-RTU), HART
Power Supply	(100~240)VAC, 24V DC, 220VAC 50Hz/60Hz, 12V(Low-power type)
Accuracy	0.2%, 0.3%, 0.5%
Alarm	Empty pipe alarm, reverse alarm, upper limit and lower limit alarm.
Structure	Split Type

P Product Overview

Flange Sensor



Split
Type



Clamped
Sensor

Holder
Sensor



Thread
Sensor



Note: The shape of the selected converter for EMF 86 series is the square.

EMF8D Low Conductivity

EMF8D low-conductivity electromagnetic flowmeter uses ultra-low conductivity medium measurement technology to break through the conventional measurement barriers of electromagnetic flowmeters. It can effectively and stably measure media with conductivity as low as $1 \mu\text{S}/\text{cm}$, providing customers with more reliable measurement solutions.

Technical Advantage

- Measurable medium conductivity as low as $1 \mu\text{S}/\text{cm}$
- Strong anti-interference ability
- High measurement accuracy
- Direct installation without verification



Application Areas

Pure water, soft water, desalted water, distilled water, deionized water, 98% alcohol, etc.

Technical Data

Display	4-line English LCD display, including forward and reverse flow, instantaneous flow, percentage of flow and flow velocity.
Parameter Setting	Setting the parameter with the button.
Language	Chinese, English. Can customize traditional Chinese, Spanish, Korean
Current Output	4mA-20mA DC
Frequency Output	Can choose full frequency or pulse equivalent output, the maximum frequency value of output is 5kHz. (passive frequency output: high level = external power supply-1V, external power supply should be < 30V, low level m5V, load current m50mA)
Alarm Output	Empty pipe alarm, upper and lower limit alarm, fault alarm.
Protection Level	IP65, IP67(IP68 is optional for sensor)
Communication	RS485(MODBUS), HART
Power Supply	(100-240)VAC or 24VDC
Accuracy	$\pm 0.5\%$
Structure	Split type, Integrated type

P Product Overview

EMF8W Microflow Rate

EMF8W microflow type electromagnetic flowmeter is a high-performance electromagnetic flowmeter specially developed for measuring small pipe diameters and low flow velocity media based on many years of experience in electromagnetic flowmeter applications. It provides the possibility of measuring micro flows as low as 1L/h.

Technical Advantage

- Measurable flow rates as low as 1L/h
- No need to reduce diameter, low lower limit of measurement
- Response speed as low as m1.0s
- Can be used without straight pipe sections
- Precise dripping, saving costs

Application Areas

Precise dripping process, such as pharmaceuticals, additives, etc.



Technical Data

Display	4-line English LCD display, including forward and reverse flow, instantaneous flow, percentage of flow and flow velocity.
Parameter Setting	Setting the parameters with the button, the Bluetooth APP
Nominal Pressure	4.0 MPa
Language	English, Chinese. Can customize traditional Chinese, Spanish, Korean
Current Output	4mA-20mA DC
Alarm Output	Empty pipe alarm, upper and lower limit alarm, fault alarm.
Protection Level	IP65, IP67(IP68 is optional for sensor)
Communication	RS485(MODBUS), HART
Power Supply	(100-240)VAC or 24VDC(0.5A)
Accuracy	±0.5%
Structure	Split type, Integrated type

EMF8J Slurry and Pulp

EMF8J slurry type electromagnetic flowmeter is a high-performance product specially used to measure solid-liquid two-phase fluid media. It breaks the long-term technical monopoly of other imported brands in the field of paper pulp and mineral pulp measurement, with excellent performance and more economical cost to provide customers with better choice.

Technical Advantage

- Innovative technologies: multi-frequency excitation, digital noise reduction and new algorithm filtering
- Accurate measurement
- Stable data
- Quick response



Application Areas

Solid-liquid two-phase fluid media such as paper pulp, mineral pulp, mud, coal-water slurry and fruit pulp.

Technical Data

Display	4-line English LCD display, display the data of instantaneous flow/cumulative flow, percentage flow rate, velocity, etc
Parameter Setting	Set the working parameters through the buttons on the panel
Language	Chinese, English. Can customize traditional Chinese, Spanish, Korean
Current Output	4mA-20mA DC
Frequency Output	Full scale frequency or pulse equivalent output can be selected, the maximum frequency value of the output is 5kHz (passive frequency output: high level = external power supply -1V, external power supply should be < 30V, low level \leq 5V, load current \leq 50mA)
Alarm Function	Empty pipe alarm, upper and lower limit alarm, fault alarm
Protection Level	IP65, IP67 (IP68 is optional for sensor)
Communication	RS485 (MODBUS), HART
Power Supply	(100-242)VAC or 24VDC
Accuracy	$\pm 0.5\%$
Structure	Integrated type, split type

P Product Overview

EMF8E Energy Measure

EMF8E Electromagnetic Flowmeter is the flowmeter which suitable for cold, heat measurement, usually called electromagnetic energy meter or electromagnetic heat meter. It is applied in heat exchange loop measuring the energy which is absorbed or converted by the heat carrier liquid.

Energy meter displays the heat with the legal unit of measurement(kWh), not only measuring the heating capacity of heating system, but also measuring the heat absorption capacity of cooling system. EMF8E electromagnetic flowmeter consists of flow measurement unit(flow sensor), energy -calculation unit (converter) and two precise paired temperature sensors(PT1000).

Technical Advantage

- Ultra-high precision
- Heat and cold measurement
- Wide operating voltage range
- Automatic switching between hot and cold

Application areas

Energy metering in heat exchange systems, such as energy supply from hot or cool water



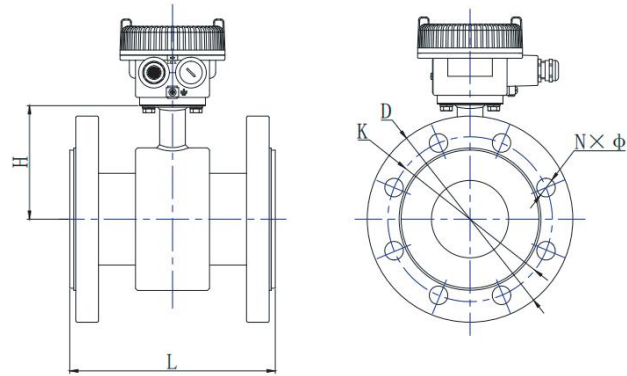
Technical Data

Display	4-line English LCD display, display the data of instantaneous flow, cumulative flow, heat(cold), the temperature of inlet and outlet water.
Current Output	4-20mA(can set flow or energy)
Pulse Output	Can choose full frequency or pulse equivalent output, the maximum frequency value of output is 5kHz.
Communication	RS485(MODBUS or BACNET)
Power Supply	220VAC, 24VDC, 100-240VAC
Temperature	-20°C~+60°C
Humidity	5%-95%
Protection Level	IP65(Sensor can be IP67, IP68)
Structure	Integrated type

Tech nial Parameter

Sensor for Flange Type

Flanged sensors are connected to pipes with flanges and are available in a variety of electrode and lining materials



Dimension of Flange type sensor

Technical Parameter

Caliber	DN2-DN2000
Nominal Pressure	0.6~4.0 MPa(Special pressure can be customized)
Electrode Material	Stainless Steel (316L), Hastelloy C (Hc), Hastelloy B (Hb), Titanium (Ti), Tantalum (Ta), Tungsten carbide (W), Platinum-Iridium (Pt)
Lining Material	Ne, FEP, PTFE, PU, PFA
Medium Temperature	-40~+180°C
Shell Material	Carbon steel
Protection Class	IP65, IP67, IP68
Connecting Flange	GB/T9124.1-2019, ANSI, JIS



Technical Parameter

Supplement for Flange Sensor

Flange type sensor technical parameters table

Caliber mm	Nominal Pressure MPa	Lining Material					Body Size mm			Connection Size mm			Weight kg			
		NE	FEP	PTFE	PU	PFA	L	D	H	K	N Hole No	Φ Diameter				
10	4.0	x		x	x		150	90	84	60	4	14	3.5			
15		x		x	x			95	84	65						
20		x			x			105	84	75						
25		x						115	90	85						
32		x					200	140	93	100	4	18	6.5			
40		x						150	93	110			7.0			
50								165	100	125			9.5			
65								185	113	145			12			
80	1.6						250	200	113	160	8	18	15			
100								220	126	180			17			
125							300	250	138	210			21			
150								300	285	151			240	28		
200	1.0						450	350	340	190	8	22	36			
250								400	395	222			350	49		
300							600	445	248	400			12	22	61	
350								505	264	460					16	22
400							700	500	565	299	515	16			26	99
450								615	325	565	20	26			121	
500			x			x	800	670	360	620	20	30	143			
600			x		x	x		780	412	725			20	30	187	
700	0.6		x		x	x	900	700	895	445			840	24	30	260
800			x		x	x		800	1015	492			950	24	33	342
900			x			x	x	1200	900	1115	555	1050	28	33	420	
1000			x			x	x		1000	1230	605	1160	28	36	503	
1200			x	x		x	x	1400	1200	1405	705	1340	32	33	666	
1400			x	x		x	x		1400	1630	805	1560	36	36	1036	
1600			x	x		x	x	1800	1600	1830	905	1760	40	36	1333	
1800			x	x		x	x		1800	2045	1005	1970	44	39	1720	
2000		x	x		x	x	2000	2265	1105	2180	48	42	2190			

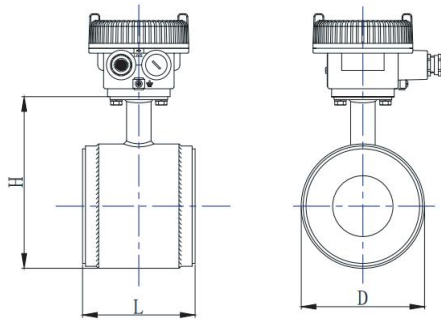
Note: " " means optional, "x" means not optional



Tech nial Parameter

Senor for Hold Type

Hold type sensor adopts flangeless design, compact structure, light weight and easy disassembly. A shorter measuring tube helps remove dirt from the wall.



Dimension of hold type sensor

Technical Parameter

Caliber	DN50-DN200
Nominal Pressure	1.0-4.0 MPa(Special pressure can be customized)
Electrode Material	Stainless Steel (316L), Hastelloy C (Hc), Hastelloy B (Hb), Titanium (Ti), Tantalum (Ta), Tungsten carbide (W), Platinum-Iridium (Pt)
Lining Material	PTFE, PU, FEP, PFA
Medium Temperature	-40°C~+110°C
Shell Material	Carbon steel(Stainless steel can be customized)
Protection Class	IP65, IP67, IP68
Connecting Flange	Pipe flanges of various standards(suchas GB, HG, etc.) with corresponding pressure levels can be used

Hold type sensor technical parameters table

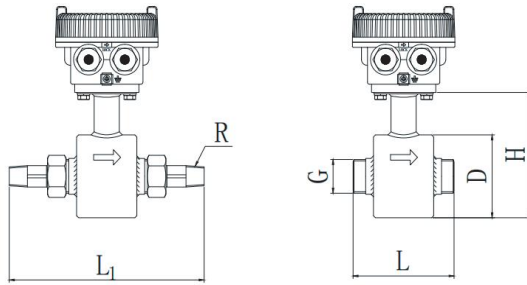
Caliber mm	Nominal Pressure MPa	Lining Material				Body Size mm			Weight kg
		FEP	PTFE	PU	PFA	L	D	H	
50	4.0					115	96	145	5
65							116	165	6
80							130	127	176
100	1.6					155	147	196	9
125							177	226	11
150							185	202	251
200	1.0					215	257	306	21

Note: " " means optional, "x" means not optional

Tech nial Parameter

Sensor for Threaded Type

The threaded sensor breaks through the conventional design of electromagnetic flowmeter, and has the advantages of small shape, convenient installation, wide measuring range, and not easy to plug.



Dimension of threaded type sensor

Technical Parameter

Caliber	DN15-DN40
Nominal Pressure	1.6MPa, 10MPa
Electrode Material	Stainless Steel (316L), Hastelloy C (Hc)
Lining Material	FEP, PU
Medium Temperature	-40°C~+140°C
Protection Class	IP65, IP67, IP68

Threaded type sensor technical parameters table

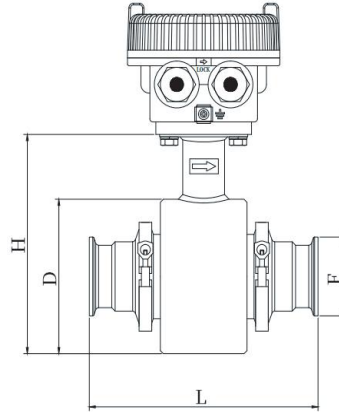
Caliber mm	Lining Material			Body Size mm				Connection Size	
	FEP	PU	PFA	L	L1	D	H	G	R
15		x		100	194	82	123	G $\frac{3}{4}$	R $\frac{1}{2}$
20		x		100	208	82	123	G1	R $\frac{3}{4}$
25				100	227	94	134	G1 $\frac{1}{4}$	R1
32				100	227	100	142	G1 $\frac{1}{2}$	R1 $\frac{1}{4}$
40				100	227	100	142	G2	R1 $\frac{1}{2}$

Note: " " means optional, "x" means not optional

Tech nial Parameter

Sensor for Clamp Type

Clamp type sensor adopts full stainless steel shell, meet the sanitary requirements of the lining, specially designed for food, beverage, medicine and other industries, The process often needs regular cleaning and disinfection, in order to disassemble conveniently, generally the connection of clamp joint and the test pipe is used.



Dimension of clamp type sensor

Technical Parameter

Caliber	DN10-DN80
Nominal Pressure	1.6MPa
Electrode Material	Stainless Steel (316L), Hastelloy C (Hc)
Lining Material	FEP, PFA
Medium Temperature	-40°C~+140°C
Shell Material	Stainless Steel(304,316,316L)
Protection Class	IP65, IP67, IP68
Connection	Material 304, clamp standard can select DIN32676, ISO2852, 3A

Clamp type sensor technical parameters table

Caliber mm	Body Size mm			F Outside Diameter of Chuck		
	L	D	H	DIN32676	ISO2852	3A
10	150	84	125.5	34	34	25
15				34	34	25
20				34	/	/
25				50.5	50.5	50.5
32		93	134.5	50.5	50.5	/
40		99	140.5	50.5	50.5	50.5
50		112	153.5	64	64	64
65	200	125	166.5	91	77.5	77.5
80		137	178.5	106	91	91

Tech nial Parameter

Electrode Parameter

The electrode material should be selected according to the corrosiveness of the measured, please refer to the corrosion manual. Corrosion tests should be carried out on special fluids.

Material	Code	Performance of Corrosion Resistance
316L	316L	Available: water, sewage, neutral and alkaline solutions, carbonic acid, acetic acid and other weak acids Unavailable: electroplating wastewater, strong acid, chloride ion solution
Hastelloy Alloy C	Hc	Available: phosphoric acid, nitric acid, seawater, caustic soda and various common chemical media Unavailable: electroplating wastewater, hydrochloric acid, hydrofluoric acid, aqua regia and sulfuric acid containing oxidizing impurities
Hastelloy Alloy B	Hb	Available: hydrofluoric acid, organic acid, sulfuric acid, phosphoric acid and other non-oxidizing acid, alkaline, salt Unavailable: electroplating wastewater, nitric acid and aqua regia
Ti	Ti	Available: seawater, various chlorides, alkalis, etc. Unavailable: electroplating wastewater, hydrochloric acid, sulfuric acid, phosphoric acid, hydrofluoric acid and aqua regia
Ta	Ta	Available: hydrochloric acid, aqua regia, sulfuric acid Unavailable: hydrofluoric acid, fluorinated salt, alkali solution, fluorinated solution
Tungsten Carbide	W	Available: mud, pulp and other abrasive medium Unavailable: electroplating wastewater, strong acid, chloride ion solution
Platinum-iridium Alloy	Pt	Available: electroplating wastewater, hydrochloric acid, sulfuric acid Unavailable: aqua regia, halogen

Note: Most media are not single-component solutions, which contain small amounts of impurities that can be fatal to some electrode materials. For example, tantalum has good corrosion resistance in pure phosphoric acid solution, but when phosphoric acid contains more than 4PPM of fluorine, it will be rapidly corroded, so unless you have experience, it is best to consult the company when selecting electrode materials.

Lining Material Selection

Material	Scope of Application	Working Temperature
Ne	Water, sewage, low concentration non-oxidizing acid, alkali, salt	-30-70°C
FEP	The wear resistance is much better than PTFE, the adhesion resistance is good, and the corrosion resistance is comparable to PTFE	-40-140°C
PTFE	Suitable for the vast majority of strong acid, alkali and other chemical fluids and high temperature fluids, food and beverage	-40-110°C
PU	Excellent wear resistance, suitable for water, cement slurry, pulp, etc.	-40-80°C
PFA	The corrosion resistance is the same as PTFE; Anti-adhesion and the rest of the application range is the same as FEP	-40-180°C

- For media that are prone to scaling, such as pulp, FEP or PFA lining that is not easy to adhere to and easy to remove scaling is preferred
- For media with hygienic requirements, FEP or PTFE lining should be selected
- In the case of negative pressure, FEP is recommended
- For abrasive media such as pulp and mud, PU lining or FEP lining should be selected

Techinial Parameter

Measuring Range

The flow corresponding to the maximum output signal. That is, the flow corresponding to the current output of 20mA or the frequency output upper limit (frequency upper limit is 5KHz), and the pulse equivalent can be set independently in the intelligent converter. The electromagnetic flowmeters produced by our company have been strictly calibrated before leaving the factory. Therefore, when selecting the range, it is not contrary to the premise that the range must be greater than the maximum flow rate, and generally the common flow rate is between 50% and 80% of the range.

Scale Flow Selection

Diameter mm DN	Scale Flow(m ³ /h)														
	0.01	0.016	0.02	0.025	0.03	0.04	0.05	0.06	0.08	0.10	0.12	0.16	0.18	0.20	0.25
10c	0.01	0.016	0.02	0.025	0.03	0.04	0.05	0.06	0.08	0.10	0.12	0.16	0.18	0.20	0.25
10b	0.03	0.04	0.05	0.06	0.07	0.08	0.1	0.12	0.16	0.2	0.3	0.4	0.5	0.6	0.7
10a	0.03	0.05	0.06	0.08	0.1	0.12	0.16	0.2	0.3	0.4	0.5	0.6	0.7	0.8	1.0
10	0.1	0.16	0.2	0.25	0.3	0.4	0.5	0.6	0.8	1.0	1.2	1.6	2.0	2.5	2.8
15	0.2	0.4	0.5	0.6	0.8	1.0	1.2	1.6	2.0	2.5	3.0	4.0	5.0	6.0	6.3
20	0.4	0.6	0.8	1.0	1.2	1.6	2.0	2.5	3.0	4.0	5.0	6.0	8.0	10	11.3
25	0.6	1.0	1.2	1.6	2.0	2.5	3.0	4.0	5.0	6.0	8.0	10	12	16	17.7
32	0.9	1.6	2.0	2.5	3.0	4.0	5.0	6.0	8.0	10	12	16	20	25	28
40	1.4	2.5	3.0	4.0	5.0	6.0	8.0	10	12	16	20	25	30	40	45
50	2.1	4.0	5.0	6.0	8.0	10	12	16	20	25	30	40	50	60	70
65	4	6.0	8.0	10	12	16	20	25	30	40	50	60	80	100	120
80	6	10	12	16	20	25	30	40	50	60	80	100	120	160	180
100	8	16	20	25	30	40	50	60	80	100	120	160	200	250	280
125	13	25	30	40	50	60	80	100	120	160	200	250	300	400	440
150	19	40	50	60	80	100	120	160	200	250	300	400	500	600	630
200	34	60	80	100	120	160	200	250	300	400	500	600	800	1000	1100
250	53	100	120	160	200	250	300	400	500	600	800	1000	1200	1400	1600
300	76	160	200	250	300	400	500	600	800	1000	1200	1600	1800	2000	2500
350	100	200	250	300	400	500	600	800	1000	1200	1600	2000	2200	2500	3000
400	140	250	300	400	500	600	800	1000	1200	1600	2000	2500	2600	3000	4000
450	170	300	400	500	600	800	1000	1200	1600	2000	2500	3000	3600	4000	5000
500	210	400	500	600	800	1000	1200	1600	2000	2500	3000	3600	4000	5000	7000
600	310	500	600	800	1000	1200	1600	2000	2500	3000	3600	4000	5000	6000	10000
700	420	700	800	1000	1200	1600	2000	2500	3000	3600	4000	5000	6000	8000	13000
800	540	800	1000	1200	1600	2000	2500	3000	4000	5000	6000	7000	8000	10000	18000
900	690	1000	1200	1600	2000	2500	3000	4000	5000	6000	7000	8000	10000	12000	20000
1000	850	1200	1600	2000	2500	3000	4000	5000	6000	7000	8000	10000	12000	16000	28000
1200	1220	2000	2500	3000	4000	5000	6000	8000	9000	10000	12000	16000	20000	26000	40000
1400	1660	2500	3000	4000	5000	6000	8000	10000	12000	16000	20000	25000	26000	30000	54000
1600	2160	3000	4000	5000	6000	8000	10000	12000	16000	20000	25000	30000	36000	40000	71000
1800	2740	5000	6000	7000	8000	10000	12000	16000	20000	25000	30000	36000	40000	45000	90000
2000	3380	6000	7000	8000	10000	12000	16000	20000	25000	30000	36000	40000	45000	50000	110000

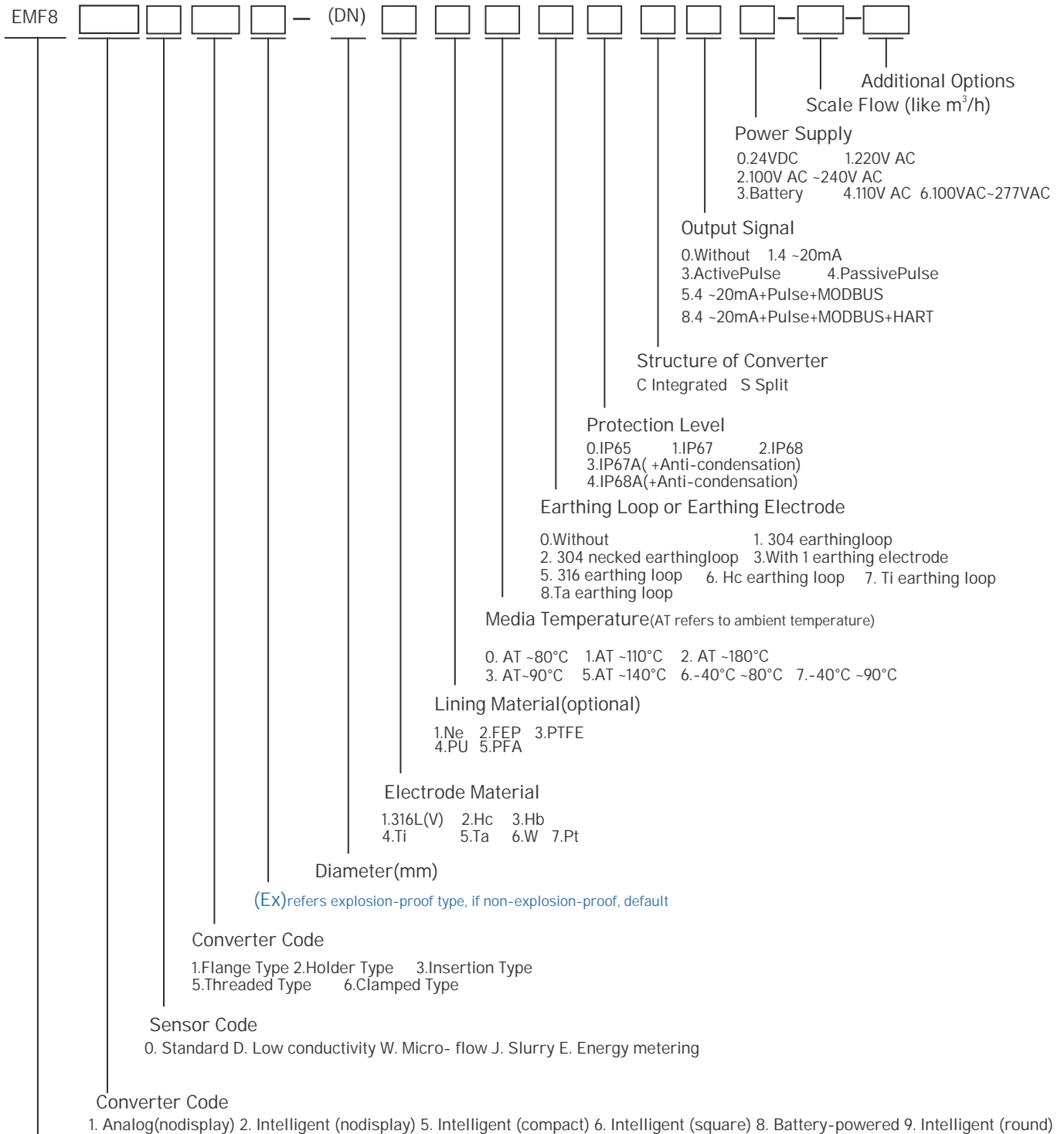
Note 1: The blue area is the recommended flow

Note 2: The formula for the flow and velocity: $V = \frac{354 \times F}{D^2}$ V – Velocity, m/s F – Flow, m³/h D – Diameter, mm



M Model Selection

Ordering Code



Flowmeter
Series No.



M Model Selection

Additional Options- Sensor

To select "Sensor Options" + "Converter Options"+ "Other options" in turn, and any inconsistency with the default option is indicated with a code

Flange type sensor

Additional Options	Selection Code	Default Value
Pressure rating of the Sensor (P)	P1:0.6MPa P2:1.0MP P3:1.6MPa P4:2.0MPa P5:2.5MPa P6:4.0MPa P7:5.0MPa P8:6.3MPa P10: 10MPa P11: 16MPa P12: 25MPa	DN10-DN65: 4.0MPa DN80-DN150: 1.6MPa DN200-DN1000: 1.0MPa DN1200-DN2000: 0.6MPa
Pipe Connection (C or J)	C1:PN6 C2:PN10 C3:PN16 C4:PN25 C5:PN40 C6:PN63 C10: PN100 C16:PN160 C25:PN250 J1:ANSI CLASS150# J2:ANSI CLASS 300# J3:JIS10K J4:JIS20K J5: ANSI CLASS 600#	DN10-DN65: PN40 DN80-DN150: PN16 DN200-DN1000:PN10 DN1200-DN2000: PN6
Flange Material (T)	T1:CS T2:304SS T3:316SS T4:316LSS	T1:CS
Shell Material(cladding plate, side plate, connecting rod) (E)	E1:CS E2:304SS E3:316SS E4:316LSS E5: Injection Molding	E1:CS
Sensor appearance treatment(V)	V1: Polyurethane layer V2: Anticorrosive epoxy coating V3: Enhanced anti-corrosion coating V4: Polishing	V1: Polyurethane layer
Companion Flange Material(F)	F0:None F1:CS F2:304SS F3:316SS F4:316LSS	F0:None
Bolts, Nuts(B)	B0: None B1:CS B2:304SS	B0: None
Sealing Element(H)	H0: None H1:Ne H2:PTFE	H0: None
Split Junction Box Material (TJ)	TJ1: Aluminium alloy ADC12 TJ2: 304 TJ3: 316 TJ4: 316L TJ5: ABS	TJ1: Aluminium alloy ADC12 Explosion-proof type defaults to TJ1

Hold type sensor

Additional Options	Selection Code	Default Value
Pressure Rating of the Sensor (P)	P3:1.6MPa P4:2.0MPa P5:2.5MPa P6:4.0MPa P7:5.0MPa P8:6.3MPa P10: 10MPa P11: 16MPa P12: 25MPa	DN50-DN80: 4.0MPa DN100-DN200: 1.6MPa
Pipe Connection (CorJ)	C3:PN16 C4:PN25 C5:PN40 C6:PN63 C10:PN100 C16:PN160 C25:PN250 J1:ANSI CLASS 150# J2:ANSI CLASS 300# J3:JIS10K J4:JIS20K J5: ANSI CLASS 600#	DN50-DN80:C5:PN40 DN100-DN200:C3:PN16
Flange Material (T)	T1:CS T2:304SS T3:316SS T4:316LSS	T1:CS
ShellMaterial(cladding plate, side plate, connecting rod) (E)	E1:CS E2:304SS E3:316SS E4:316LSS	E1:CS
Sensor Appearance Treatment(V)	V1:Polyurethane layer V2:Anticorrosive epoxy coating V3: Enhanced anti-corrosion coating V4:Polishing	V1: Polyurethane layer
Companion Flange Material(F)	F0:None F1:CS F2:304SS F3:316SS F4:316LSS	F0: None
Bolts, Nuts(B)	B0: None B1:CS B2:304SS	B1:CS
Sealing Element(H)	H0: None H1: Rubber gasket H2: PTFE H3: Metal PTFE wound gasket H4: O-ring	H0: None
Split Junction Box Material (TJ)	TJ1: Aluminium alloy ADC12 TJ2: 304 TJ3: 316 TJ4: 316L TJ5: ABS	TJ1: Aluminium alloy ADC12 Explosion-proof type defaults to TJ1

M Model Selection

Threaded type sensor

Additional Options	Selection Code	Default Value
Pressure Rating of the Sensor (P)	P1: 0.6MPa P2: 1.0MPa P3:1.6MPa P10: 10MPa	P3: 1.6MPa
Shell Material(cladding plate, side plate, connecting rod) (E)	E1:CS E2:304SS E3:316SS E4:316LSS	E1:CS
Sensor Appearance Treatment(V)	V1: Polyurethane layer V2: Anticorrosive epoxy coating V3: Enhanced anti-corrosion coating V4:Polishing	V1:Polyurethane layer
Piping Form	N0: none N1: welded N2: Y inch taper pipe thread N3: inch straight thread (high pressure only) N4: pagoda head	N2: Y inch taper pipe thread
Pipe/nut Material(G)	G0: None G1:304/304 G2: H62 Copper/H62 copper G3:304/H62 Copper G4: Carbon steel quenched (with and under high pressure only)	G2: H62 Copper /H62 copper
Split Junction Box Material (TJ)	TJ1: Aluminium alloy ADC12 TJ2: 304 TJ3: 316 TJ4: 316L TJ5: ABS	TJ1: Aluminium alloy ADC12 Explosion-proof type defaults to TJ1

Clamp type sensor

Additional Options	Selection Code	Default value
Shell Material(cladding plate, side plate, connecting rod) (E)	E2:304SS E3:316SS E4:316LSS	E2:304SS
Piping Standard (K)	K1: DIN32676 K2: ISO2852 K3: DIN11851 K4: 3A K5:ASME BPE	K1: DIN32676
Split Junction Box Material (TJ)	TJ1: Aluminium alloy ADC12 TJ2: 304 TJ3: 316 TJ4: 316L TJ5: ABS	TJ1: Aluminium alloy ADC12 Explosion-proof type defaults to TJ1

Other Options

Option Name	Selection Code	Default Value
Accuracy(Q)	Q0: 0.2 Q1: 0.3 Q2: 0.5 Q3: 1.0 Q4: 1.5 Q5: 2.5 Q6: 0.5%+0.5mm/s Q7: 0.5%+1mm/s Q8: 1%+1mm/s	Q2: 0.5
Certificate Data (S)	S0: Certificate S1: Certificate + calibration data S2: English data (certificate, manual) S3: English data (certificate, manual) + calibration data S4: OEM data (certificate, manual) S5: OEM data (certificate, manual) + calibration data	S0: Certificate
E89 Converter Cable Seal Plug (W)	W1: Nylon cable connector W2: Waterproof seal plug W3: M20*1.5 conduit connector W4:G1/2 conduit connector W5:1/2"NPT conduit connector W6: Metal cable connector	W1: Nylon cable connector explosion-proof type default W3, optional W4, W5
E86/E85/E84/E82 Converter Cable Seal Plug (W)	W1: Nylon cable connector W6: Metal cable connector	W1: Nylon cable connector
Signal Cable Length (L) Split type	5 meters or a multiple of 5 meters, expressed by "L+ number", such as L20 means 20 meters of special signal line	L10: 10 meters of signal line
Special Equipment Inspection Certificate (TS)	TS: with special equipment inspection certificate	None

R eference List

Liquid Conductivity

Liquid	Temp(°C)	Conductivity (μS/cm)	Liquid	Temp(°C)	Conductivity (μS/cm)
Industrial Water	25	>100	High-grade Distilled Water	25	0.04
Acetone	25	0.02-0.06	Seawater	25	4.0x10 ⁴
Ammonia	25	0.13	Ammonia Water(4%-30%)	25	2.0x10 ² -1.0x10 ³
Sulfuric Acid(5%-99.4%)	25	2.1x10 ⁵ -8.5x10 ³	Saline Solution(2.5%)	25	2.0x10 ⁵
Sodium Hydroxide(4%-50%)	25	8.0x10 ⁴ -1.6x10 ⁵	Ethyl Bromide	25	<0.02
Low-grade Distilled Water	25	5.0	Ethyl iodide	25	<0.02
Benzene	-	0.076	Ethylidene Dichloride	25	<0.017
Ethyl Phenolate	25	<0.017	Ethylamine	0	0.4
Benzoic Acid	125	3.0x10 ⁻³	Acetic Anhydride	0	1.0
Ethyl Benzoate	25	<1.0x10 ⁻³	Acetonitrile	20	7.0
Benzyl Benzoate	25	<1.0x10 ⁻³	Ethyl	25	<4.0x10 ⁻⁷
Benzaldehyde	25	0.15	Acetophenone	25	6.0x10 ⁻³
Aniline	25	0.024	Acetylchloride	25	0.4
Phenol	25	<0.017	Acetamide	100	<43
Turpentine	-	2.0x10 ⁻⁷	Acetyl Bromide	25	2.4
O-Toluidine	25	<2.0	Acetic Acid	25	0.0112
N-Heptane	-	<1.0x10 ⁻⁷	Methyl Acetate	25	3.4
Oleic Acid	15	<2.0x10 ⁻⁴	Allyl Alcohol	25	7.0
Diethyl Oxalate	25	0.76	Trichloroacetic Acid	25	3.0x10 ⁻³
Ethyl Acetate	25	<1.0x10 ⁻³	Arsenic Trichloride	35	1.2
Acetaldehyde	15	1.7	Tribromide Arsenic	25	1.5
Diethyl Amine	-33.5	2.2x10 ⁻³	N-Hexane	18	<1.0x10 ⁻¹²
Xylene	-	<1.0x10 ⁻⁹	Methyl Nitrate	25	4.5
Sulfur Dichloride	35	1.5x10 ⁻²	Ethyl Nitrate	25	0.53
Dichloroacetic Acid	25	7.0x10 ⁻²	Chlorohydrin	25	0.5
Dichloro Ethanol	25	12	Chloroacetic Acid	60	1.4



Assessment Sheet

NO.	ITEM	SPECIFICATION					
		1	Pipe Size	Inside Diameter		Outside Diameter	
2	Pipe Material						
3	Pipe Route						
4	Measure Media						
5	Media Status	Liquid	Gas	Gas Mixture	Gas-liquid Mixture		
6	Mixing Ingredient						
7	Standard Density			Unit: kg/m ³			
8	Working Density			Unit: kg/m ³			
9	Compression Factor						
10	Media Viscosity						
11	Pressure Loss						
12	Temperature	Min	<input type="text"/>	Normal	<input type="text"/>	Max	<input type="text"/>
13	Pressure	Min	<input type="text"/>	Normal	<input type="text"/>	Max	<input type="text"/>
14	Flow Unit						
15	Flow	Min	<input type="text"/>	Normal	<input type="text"/>	Max	<input type="text"/>
16	Scale Flow						
17	Model						
18	Buyer						
19	Contact Person						
20	Tel No.						
21	Fax No.						

Note:

After filing, you can send to our E-mail or Fax.



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